



**INTERACTION BETWEEN THE PROCESS USED TO INTRODUCE CHANGE
AND THE PERSONALITY OF ORGANIZATIONAL MEMBERS:
AN INTERNATIONAL TEST**

THESIS

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AFIT/GIR/ENV/05M-15

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Abstract

Organizations introduce change to strengthen organizational performance and improve effectiveness. Drawing from literature in the areas of organizational change and personality characteristics, this study seeks to uncover the influence personality has on an individual's readiness for change. Data were utilized from two previous studies that sampled both an American organization and a Korean organization. The administered questionnaires captured data pertaining to the individual's perceptions of the change process, their personality attributes, and their readiness for change. Using a statistical method known as moderated multiple regression, this study examined whether personality moderates the impact the change process has on an individual's readiness for change. While the results of this study were not conclusive, evidence was uncovered indicating there are meaningful relationships between the process used to induce change, personality, and an individual's readiness for change. This is another indication that the organizational leadership should not overlook the lower echelon worker's individual needs and concerns when implementing change.

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Terry W. Riddle Jr.

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INTERACTION BETWEEN THE PROCESS USED TO INTRODUCE CHANGE AND THE PERSONALITY OF ORGANIZATIONAL MEMBERS: AN INTERNATIONAL TEST

I. Introduction and Literature Review

Organizations introduce change to strengthen organizational performance and improve effectiveness. Many argue that the ability to adapt to changing environmental conditions is vital for the future success of any competitive organization (Greenberg, Baron, Sales, & Owen, 2000). For that reason, employees are facing an increasing demand to change to meet organizational needs. Change objectives include such things as attitudes and skills, worker roles, technology, or the competitive strategy of the organization. However, the extent to which the organization achieves the benefits that are desired from change is affected by the process that organizational leaders use to encourage its adoption and implementation by its members. The literature addresses the processes that organizational leaders can use to encourage change through a discussion of change facilitation strategies. These change facilitation strategies encourage affected employees to adopt the appropriate behaviors that translate into organizational gains. Presumably, if the best process or change facilitation strategies are identified and used to send the appropriate messages about a specific change, an organization should move smoothly through the stages of change and reap the desired benefits quickly. Yet the fact remains 70% of change initiatives fail due to poorly implemented change facilitation strategies (Beer & Nohria, 2000).

One of the key difficulties in choosing or implementing the appropriate change facilitation strategy has to do with a spectrum of potential human issues. Of specific

concern is the employee's resistance to change, which is an indication of change aversion. The hardest task for leaders in implementing change is overcoming resistance (Kotter & Schlesinger, 1979). Even the great politician Niccolo Machiavelli, in the early sixteenth century, once stated, "There is nothing more difficult to carry out, nor more doubtful of success, nor more dangerous to handle, than to initiate a new order of things" (p. 69). Reger, Mullane, Gustafson, and DeMarie (1994) state that resistance can surface from employees for various reasons such as selfishness, lack of understanding, or having no personal stake in the proposed change. Kotter and Schlesinger (1979) suggest that resistance may occur because employees have "a desire not to lose something of value, a misunderstanding of the change and its implications, a belief that the change does not make sense for the organization, and a low tolerance for change" (p. 107). Regardless of the root cause, resistance is often viewed as a hindrance to the process of change, but may be overcome by creating readiness for change (Armenakis, Harris, & Feild, 1999).

In order to counter resistance to change and other issues, researchers suggest that there are several change facilitation strategies that can be used to promote the change process, undermine resistance, and encourage the implementation and adoption of change. Caruth, Middlebrook, and Rachel (1995) state that in order to overcome resistance, the organization leader must create the proper attitude among the organization's members and flood the organization with information about the change. Then, following these actions, a leader must set a good example, solicit constructive opinions from employees about the change and, finally, reward acceptance. Furthermore, Reger, Mullane, Gustafson, and DeMarie (1994) suggest change facilitation strategies that managers can use to increase their success rates. Examples of these change

facilitation strategies include conducting a pre-change audit for understanding the organization's needs, customizing the change to the organization's situation or introducing the change in a series of steps. Henry (1997) suggests that leaders must unite in their commitment for the purpose of the change and ensure all leaders personally agree on the need for the change, whatever form it may take. Henry goes on to say that, leaders must be able to articulate the rationale for the change and be prepared for resistance.

Armenakis, Harris, and Feild (1999) recommend seven specific change facilitation strategies that can be used by leaders to implement the process of change. These change facilitation strategies include: (a) use of persuasive communication, (b) elicitation of participation by those affected, (c) alignment of human resource management practices, (d) use of symbolic actions, (e) enactment of diffusion programs, (f) management of internal and external information, and (g) execution of formalization practices. The purpose of these change facilitation strategies is to influence the organizational members' readiness for a change so they will embrace the change rather than reject or resist it.

This study focuses on two particular change facilitation strategies of the change process, quality of information and participation. Providing quality of information during times of change reduces the level of stress experienced by organizational members. In fact, Kotter and Schlesinger (1979) argue employee commitment to a change initiative is enhanced when senior leaders communicate why the change is occurring and how it will affect the employees. Similarly, including the members or allowing them to participate as the change is implemented builds support for the change and establishes credibility between the leadership and the organizational members (Armenakis, Harris, & Feild, 1999). Wanberg and Banas (2000) found that providing quality of information and

participating in the change process leads to a “feeling of openness” toward the initiated changes among employees, thereby, increasing employees’ readiness for change.

Although the literature supports the idea that the use of effective change facilitation strategies will enhance the adoption of change, it is still reasonable to expect that different people may respond to these change facilitation strategies differently. In this vein, researchers in the change arena have begun to shed light on the way individual attributes influence an individual’s readiness for change. Judge, Thoresen, Pucik, and Welbourne (1999) recently found that certain personality characteristics were strongly related to an individual’s self-reported capacity to cope with organizational turbulence. Similarly, Wanberg and Banas (2000) found that individuals’ self-esteem and perceived control were positively related to their general attitudes toward change. These results were replicated by Vakola, Tsaousis, and Nikolaou (2004), who found that attitudes toward change were related to the big five personality traits (i.e., extraversion, neuroticism, openness, agreeableness, and conscientiousness) in expected ways.

Research Objectives

Purpose. Given what is known about key change facilitation strategies combined with emerging research on the link between personality and change, the purpose of this study is to explore the moderating effects an organizational members’ personality (i.e., locus of control, positive affect, and negative affect) has on the process (i.e., participation and quality of information) used to encourage individual readiness for organizational change.

Research question. The principal question to be answered in this study is: Are individual perceptions of the change facilitation strategies used in the organizational

change process moderated by individual personality traits in determining individuals' readiness for that change?

Investigative questions. This study will examine the following investigative questions:

1. To what extent are perceptions of the process used to introduce change related to individuals' readiness for change?
2. Collectively, how does the change process and the individuals' personality characteristics directly effect readiness for change?
3. To what extent is the relationship between the perceptions of the process used to introduce change and readiness for that change moderated by personality?
4. To what extent does individuals' personality relate to readiness for change?

In the context of the ideas discussed previously, this study is designed to integrate the research on change facilitation strategies (i.e., process) with the recent literature that has explored how personality attributes influence readiness for change. Specifically, this study explores the moderating effects organizational members' personality has on the perceptions of change facilitation strategies (i.e., participation and quality of information) used to encourage individual readiness for organizational change. Before moving on to this specific purpose, this chapter will first discuss the various stages of implementing change that organizations may move through as change is introduced. Secondly, it will address the relevant empirical and theoretical literature that relates to change facilitation strategies used by leaders to perpetuate organizational change. Thirdly, key studies that suggest relationships between an individual's personality and his or her readiness for change are explored. Fourthly, literature focusing on readiness for change will be

presented. In the final section, the model that will be tested is presented along with a discussion of the theory that guided the development of that model.

Stages of Implementing Change

Over the years, several theories have been presented to help understand and describe the stages organizations go through to implement organizational change. Of the change models that are discussed in this literature review, two distinct classifications are evident. While the two categories are related, it is apparent there are those change theories that provide descriptive models and those that offer prescriptive models (Dorey, 2004). Descriptive change models “describe” the change process by illustrating the various stages that organizations will follow when implementing change. Alternatively, prescriptive models “prescribe” actions or strategies for change agents to use in encouraging organizational members to move through the change process. This literature review will examine some examples of descriptive models in the following subsection and examples of prescriptive models in the subsequent subsection.

Descriptive change models. To begin to understand the stages of implementing change it is important to start with Lewin (1947) who presented one of the earliest models. Lewin theorized that in order for successful change to occur, organizations must go through three stages: unfreezing, learning the new behavior, and refreezing. Unfreezing occurs when there is sufficient motivation among organizational members to be receptive of the change. Learning the new behavior occurs as the organizational members temporarily alter their attitudes and behaviors to conform to the expectations of the change. Refreezing occurs when the change becomes a permanent behavior of the organizational members. From the time that Lewin first developed and published his

original change theory in 1947, researchers have attempted to expand on his work to elaborate on the stages of change. While in some cases the change models become more explicit, all tend to overlap with Lewin's (1947) original model. Lewin's (1947) theoretical model can be viewed in Figure 1.

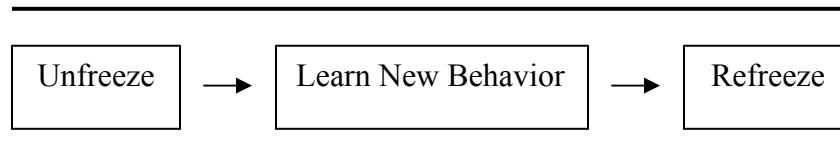


Figure 1. Stages of Change (Lewin, 1947)

Armenakis, Harris, and Feild's (1999) description of change stages was not surprisingly, guided by Lewin (1947). However, Armenakis et al. (1999) extrapolate four stages to illustrate the process of change. The four stages include: (a) readiness, (b) adoption, (c) commitment, and (d) institutionalization. At the onset of change, Armenakis et al. advocate generating readiness for change in the first stage so that resistance is lessened, with the underlying premise being that an appropriate message regarding the change is conveyed using proper change facilitation strategies. Readiness is defined as "a cognitive state comprising of individuals' values, mind-set, and intentions toward the change effort" (Armenakis et al., 1999). The second stage, adoption, is the act of making the temporary behavioral changes, therefore, still leaving the possibility of reverting to the old practices. According to Armenakis et al., the third stage, commitment, is revealed by three behaviors. These behaviors include: (a) compliance (i.e., the extent to which individuals expect to be rewarded or punished for conformity), (b) identification (i.e., the degree that individuals want to enter into or remain an

acquiescent member of the group), and (c) internalization (i.e., the event in which new behavior and all its intricacies are viewed as pleasing and appropriate). The fourth and final stage, institutionalization, is measured in the degree of commitment organizational members have to the new set of behaviors and whether or not those behaviors have become permanent.

Another change model is provided by Prochaska and Di Clemente (1982). This four-stage change model takes Lewin's (1947) model and adjusts it to emphasize making a change in an individual's personal behavior (e.g., smoking cessation). Prochaska and Di Clemente's four-stage process depicts the individual *contemplating* the change, followed by a period of *determination*, and taking *action* to make the behavioral change. In the final stage, a period of *maintenance* follows to stem the occurrence of relapse. While relapse is not included in the change process model (because of the chance it may develop at any point along the initiative), it is recognized as the symptom of an unsuccessful change process. Prochaska and Di Clemente believe that the relapse factor suggests that individuals who experience setbacks may cycle through stages repeatedly, moving through stages multiple times.

In hopes of developing a comprehensive change model, Isabella (1990), through a study involving 40 managers conceptualized yet another four-stage change model. The four stages are as follows: (a) anticipation, which occurs when individuals assemble secondhand information into a logical perceived reality, (b) confirmation, which develops when the individual interprets past events using a conventional frame of reference, (c) culmination, which takes place when individuals reflect on events before and after the

change to understand and find meaning in the present, and (d) aftermath, which occurs when the individual considers the ramifications of the change.

Finally, Perlman and Takacs (1990), attempt to explain how individuals move through the stages of change by explaining the role individual emotions may play in progressing through change. Perlman and Takacs argue that planned organizational change is often unsuccessful because change agents do not take into account individual human emotions. All too often “organizational change efforts ignore the psychological impact of grief and thus hinder the goals of change” (Perlman & Takacs, 1990, p. 33). Perlman and Takacs offer a ten-stage change model to help leaders understand and deal with the more personal and emotional issues that are brought about by change. The ten stages include: (a) equilibrium (i.e., workers are vested and complacent with the status quo), (b) denial (i.e., energy is expended to retain the status quo), (c) anger (i.e., when the energy is exhausted, denial is replaced by feelings of anger, rage, envy and resentment), (d) bargaining (i.e., workers try to negotiate a stalemate or compromise to the amount of change), (e) chaos (i.e., workers feel powerless and are frustrated from a lack of direction), (f) depression (i.e., workers grieve for the past when times were good), (g) resignation (i.e., workers finally begin to let go of the past and stop resisting change), (h) openness (i.e., workers become receptive to the benefits of the change), (i) readiness (i.e., workers are ready to begin taking an active role in the new way of doing business), and (j) re-emergence (i.e., workers are fully engaged and have let go emotionally and intellectually of the old ways). To summarize, Perlman and Takacs advocate by simply addressing these “intellectual and emotional issues” in which employees suffer from

during times of change, change agents should be able to sufficiently ward off resistance and reach the organization's change goals.

Descriptive models such as those cited previously are useful for understanding the broad stages of the change process. Table 1 provides a brief summary of all the descriptive models presented in this literature review and a representation of how each of the recently conceived models are consistent with the stages of change that were originally presented by Lewin's (1947) original model. Generally, each of these descriptive models suggests change is a linear process where individuals and organizations systematically step through discrete stages, culminating with new behaviors or processes being integrated into the collective way of doing business. However, the descriptive models stop short of providing recommendations about how to better move organizational members through the change process. Prescriptive models provide us with such information and are discussed in the following subsection.

Table 1. Descriptive Change Models

| Source | Stage 1 | Stage 2 | Stage 3 |
|-----------------------------------|-------------------------------------------------------------|-------------------------------------|-----------------------|
| Lewin (1947) | Unfreezing | Learn New Behavior | Refreezing |
| Armenakis, Harris, & Feild (1999) | Readiness | Adoption/ Commitment | Institutionalization |
| Prochaska & Di Clemente (1982) | Contemplation/Determination | Action | Maintenance |
| Isabella (1990) | Anticipation | Confirmation | Culmination/Aftermath |
| Perlman & Takacs (1990) | Equilibrium/ Denial/ Anger Bargaining/ Chaos/ Depression | Resignation/ Openness/ Readiness | Re-emergence |

Prescriptive change models. The literature does not neglect the individual with respect to change, for they are the levers of change. While the descriptive models allow an understanding of the stages of change, the prescriptive models give these levers of

change ideas on how to guide their organizations through the stages presented in the descriptive models. Such instructions explicitly prescribe actions to be taken that assist leaders as they try to implement change quickly and successfully. Many prescriptive models are still tailored around Lewin's (1947) original three-stage model. However, the prescriptive model takes a micro-level perspective in trying to illustrate what factors are important in moving individual employees through the change process. According to Dorey (2004), a prescriptive model generally includes at least these two key components: "the message to be delivered to the members of the organization and the methods used to deliver the message" (p. 11).

One of the authors who proposed a prescriptive model was Judson (1991). He advocates that change is comprised of five steps: (a) analyzing and planning the change, (b) communicating the change, (c) gaining acceptance of new behaviors, (d) changing from the status quo to a desired state, and (e) consolidating and institutionalizing the new state. Within each step, Judson (1991) discusses methods for minimizing resistance to change. Quality of information through media, reward programs, bargaining, and persuasion are a few of the methods that Judson advocates for overcoming employee resistance to change.

Another author, Kotter (1995), suggested eight steps for change agents to follow in attempting radical change initiatives. The eight steps include: (a) establishing a sense of urgency by relating external environmental realities to real and potential crises and opportunities facing an organization, (b) forming a powerful coalition of individuals who embrace the need for change and who can rally others to support the effort, (c) creating a vision to direct the change effort, (d) communicating the vision through multiple

mediums, (e) empowering others to act on the vision by changing outdated structures and procedures that hinder implementation, (f) planning for and creating short-term wins by exposing improvements and recognizing employee involvement, (g) consolidating improvements and changing other structures, systems, procedures, and policies that aren't consistent with the vision, and (h) institutionalizing the new approaches by revealing the relationship between the change effort and organizational success. The prescriptive methods offered by Kotter demonstrate that employee participation and constant quality of information between employee and upper management are two important keys to effective organizational change.

Additional work done by Reardon, Reardon, and Rowe (1998) attempts to replicate Kotter's (1990) early findings with a few notable exceptions. Reardon et al. (1998) took Kotter's (1990) original three-step model and added two additional steps. While these two additional steps, launching and maintenance, were alluded to in Kotter's (1990) book, neither step was formally included in the original working model. According to Reardon et al. (1998), it is essential that these two steps be included in the change process and not be overlooked because they represent two vital steps that must occur for change to succeed. The Reardon et al. model includes: (a) planning (i.e., charting the course for change), (b) enabling (i.e., explaining the plan to those who will be involved in the change effort and eliciting their involvement), (c) launching (i.e., implementing the change effort), (d) catalyzing (i.e., focusing on the people's needs by letting them know their efforts count), and (e) maintenance (i.e., overseeing and guiding people to continue their involvement in the change process). The Reardon et al. model emphasizes the need for participation and quality of information. According to Reardon

et al., leaders that enact change through constant communication and constant inclusion of affected workers in the planning and implementation of the change are more likely to produce meaningful and lasting change.

Another author, Galpin (1996), proposed a model comprised of nine steps. As a foundation for each step in the model, Galpin stressed the importance conveying the message of change through understanding and engagement of the organization's culture, rules and policies, customs and norms, ceremonies and events, and rewards and recognition. Galpin's change model consists of the following steps: (a) establishing the need to change, (b) developing and disseminating a vision of a planned change, (c) diagnosing and analyzing the current situation, (d) generating recommendations, (e) detailing the recommendations, (f) pilot testing the recommendations, (g) preparing the recommendations for rollout, (h) rolling out the recommendations, and (i) measuring, reinforcing and refining the change. Galpin attempted to capture in his model the realization that change does not stop but rather continuously imposes its effects on organizations. By following Galpin's methods of change and remembering that the company's most valuable asset is the creativeness of its people, organizations will be better strategically positioned to meet increasing demands for change in efforts to remain competitive in an evolving business environment.

The prescriptive models illustrated in this subsection all try to explain and provide prescribed methods of overcoming potential individual resistance. The prescriptive models add value to the descriptive models by taking in consideration the effects of change on the individual employee and what can be done to encourage the employee to participate (Dorey, 2004). Therefore, such prescriptive models are important tools

because they provide clear and pragmatic procedures to guide leaders through the stages of the change process as described by descriptive models. However, “because those targeted for change vary in terms of both where they are with respect to change and their readiness for change, it has been suggested that no single change model can be used organization-wide; significant organizational and individual differences exist that make some approaches more or less effective than others in specific contexts” (Beruvides & Rossler, 1995, p. 19). Table 2 provides a brief summation of the prescriptive modes provided in this subsection and displays them as they could theoretically be applied to move change through Lewin’s (1947) original three-stage model.

Table 2. Prescriptive Change Models

| Source | Stage 1 | Stage 2 | Stage 3 |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Lewin (1947) | Unfreezing | Learn New Behavior | Refreezing |
| Judson (1991) | Analyzing and planning the change/ Communicating the change | Gaining acceptance of new behaviors/ Changing from the status quo to a desired state | Consolidating and institutionalizing the new state |
| Kotter (1995) | Establishing a sense of urgency/ Forming a powerful guiding coalition/ Creating a vision/ Communicating the vision | Empowering others to act on the vision/ Planning for and creating short-term wins/ Consolidating improvements and producing still more change | Institutionalizing new approaches |
| Reardon, Reardon, & Rowe (1998) | Planning/Enabling | Launching/ Catalyzing | Maintaining |
| Galpin (1996) | Establishing the need to change/ Developing and disseminating a vision of a planned change/ Diagnosing and analyzing the current situation/ Generating recommendations/ Detailing the recommendations | Pilot testing the recommendations/ Preparing the recommendations for rollout/ Rolling out the recommendations | Measuring, reinforcing, and refining the change |

In sum, all the authors have attempted to describe the stages or steps that organizations do go through or should go through as they attempt to transform and

change to increase their overall effectiveness. Again, the descriptive models specify the conceptual stages that organizations go through as change is introduced. In contrast, prescriptive models attempt to illustrate the methodology of change by offering methods to deal with human issues, for instance, guidance on how the change message and the change message delivery should follow through a sequence of steps (Dorey, 2004). Regardless of the model that is used to demonstrate change progression, the goal of outlining such steps is to assist organizations in moving through the stages quickly as possible so that the benefits that come with change can be realized. Clearly, at the core of these prescriptive models there is the insinuation that employees want to be given ample quality of information about the proposed change and that each individual also seeks to be allowed to participate in a meaningful way. Knowing employee desires, leaders can utilize change facilitation strategies, such as quality of information and participation, in order to gain employee compliance in regards to change. The next section will outline these change facilitation strategies available to leaders to help them move through the stages of change more proficiently.

Change Facilitation Strategies

Not surprisingly, much of the literature has focused on the way leaders should go about introducing or managing change. This literature gives general recommendations such as “be fair” (Kim & Mauborgne, 1997) or create “buy-in” from the employee (Guaspari, 1996). Essentially, change agents can promote change adoption through the use of change facilitation strategies. The literature advocates that the purpose of these change facilitation strategies is to influence organizational members’ readiness for change in such a way that they will react positively to the change and not engage in

resistance activities. Theoretically, by using the most efficient change facilitation strategies to convey the message for change to affected employees the process of acclimating to the change initiative can be accelerated or smoothed. One of the most comprehensive lists of change facilitation strategies assembled comes from Armenakis, Harris, and Feild (1999). As mentioned in the introduction, these authors have compiled seven possible change facilitation strategies that include: (a) use of persuasive communication, (b) elicitation of participation by those affected, (c) alignment of human resource management practices, (d) use of symbolic actions, (e) enactment of diffusion programs, (f) management of internal and external information, and (g) execution of formalization practices. While Armenakis et al.'s (1999) list is not all-inclusive; it does give a general idea of how diverse a spectrum these change facilitation strategies can span. The literature implies that these change facilitation strategies can be used individually; however, they may elicit more effective results when used in collaboration with others.

The literature supports the notion that the change facilitation strategy “fair and just” process is a reliable method for inducing meaningful change. Kim and Mauborgne (1997) argue that the concept of fair and just process has a substantial effect on the perceptions of employees and their readiness for change. More accurately, Kim and Mauborgne speculate that the process or context in which change is carried out is oftentimes considered more important to the affected party regardless of whether the outcome is considered positive or negative. The following subsection will illustrate fair and just process and its contribution to a change initiative. Presumably, an employees’ readiness for the change process can be affected through two vital subcomponents,

participation and quality of information (Covin & Kilmann, 1990), which are elements of fair and just process and will be discussed separately in further subsequent subsections.

Fair and just process. Fair and just process literature suggests that when workers see themselves as being treated fairly, they develop many of the attitudes and behaviors required for successful change within an organization. Studies show perceptions of fairness regarding organizational decisions have a significant impact on an employees' job satisfaction, organizational commitment, and job performance (Farmer, Beehr, & Love, 2003; Decker, Wheeler, & Johnson, 2001). In their research Cobb, Wooten and Folger (1995) have uncovered supportive evidence indicating fair and just treatment of individuals involved in organizational change has a resounding effect on increasing the chances of change success by creating readiness for change.

One author to conduct research on the concept of fair and just process was Daly (1995). He argued employee commitment to a change initiative is enhanced when managers “educate” or provide quality of information to employees about how the change will affect individuals on a personal level. The assumption is that when “changes are explained to employees, we can expect them to view both the outcomes of the changes and process behind the change decision as more fair” (Daly, 1995, p. 416). Daly’s research found that while employees tended to see a higher need for an explanation or information about the change when the outcome was judged unfair, he also found that employees require an explanation regardless of the outcome in order to evaluate the decision process.

Therefore, certain conditions must be satisfied for fair and just process to be effective. According to Kim and Mauborgne (1997), a fair and just process is composed

of three components that make the process of change appear to be fair by employees. Under close examination, these three components can be shown to represent participation and quality of information. The components of the Kim and Mauborgne model are *engagement*, *explanation*, and *expectation clarity*. Engagement is similar to participation because it involves making sure individuals are given the opportunity to participate in decision making via sharing their insights and opinions with management. Through engagement or the constant inclusion of workers, management will be capable of making more informed decisions and build unified commitment in carrying out the change initiative. Explanation and expectation clarity, which parallel forms of quality of information, require everyone concerned knows the circumstances surrounding decision making and that the new expectations are clearly articulated so that ambiguity and confusion are reduced. Employees may not agree with the decision results but they will be more inclined to make the desired changes if they feel they are provided an adequate explanation for the course of action. Kim and Mauborgne (1997) contend, “fair and just process satisfies basic human needs of wanting to be taken seriously and wanting to understand the rationale behind specific decisions” (p. 131). Kim and Mauborgne (1997) also advocate “that fair process will promote building trust and commitment between employees and management which leads to producing voluntary cooperation, and voluntary cooperation drives performance, leading people to go beyond the call of duty by sharing their knowledge and applying their creativity” (p.134). See Figure 2 for a visual representation of how fair and just process and its subcomponents, participation and quality of information may relate to an individual’s readiness for change. While the previous literature on fair and just process alludes to the idea that participation and

quality of information are both important to the change process, there is still a need to examine these concepts more closely to fully articulate and understand their necessity in this study. The following two subsections will be utilized to explain participation and quality of information in more precise detail.

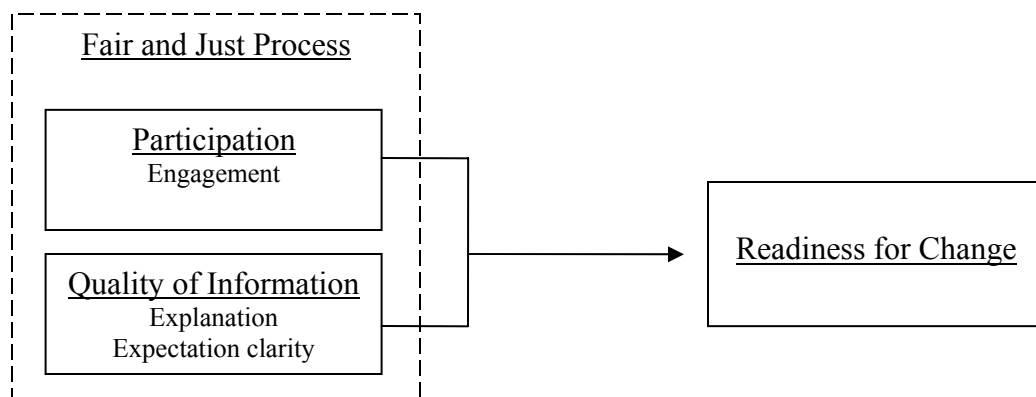


Figure 2. Impact of Fair and Just Process on Readiness for Change (Kim & Mauborgne, 1997)

Participation. Employees’ willingness to participate is fundamental to the success of any planned change initiative (Beruvides & Rossler, 1995) because participation has the proclivity to reduce resistance (Kotter & Schlesinger, 1979). “Participation refers to allowing workers to have input regarding the proposed change” (Jung, 2003, p. 20) or “being involved in significant day-to-day, work–related decisions” (Muczyk & Adler, 2002, p. 9). It should be obvious that “an employees’ willingness to participate indicates their intention to perform their responsibilities in keeping with the spirit of the planned change” (Miller, Johnson, & Grau, 1994, p. 65). Literary evidence supports that having some influence over the change plan will strengthen the support of the people affected by the perceived changes (Kotter & Schlesinger, 1979); therefore, “people are more likely to support what they help to create” (Stanislao & Stanislao, 1983,

p. 75). Hammer and Champy (2001) advocate a more effective and timely work process by pushing the decision-making responsibly down to where the work is being done. Hence, for an organization to stay competitive and build commitment to change it must allow participation at every level (Beitler, 2003; Hammer & Champy, 2001; Vakola, Tsaousis, & Nikolaou, 2004).

A renowned study conducted by Coch and French (1948) illustrates why participation is necessary in a changing work environment. Coch and French revealed that turnover and aggression, a by-product of change, is inversely affected by the amount of participation employees perceived to have in decision-making. Coch and French (1948) performed their experiments at the Harwood Manufacturing Corporation, which at the time was suffering from a cycle of high turnover and low production rates. In order to ascertain whether a solution could be found to recant the adverse effects of change, Coch and French utilized participation as a moderating variable and examined its impact on employees who recently went through job requirement changes. The various levels of participation were represented by four groups, one that incorporated no participation (comparison group), one that experienced participation through representation, and two groups for which its members had the opportunity to be directly involved with the change initiative. Coch and French showed that an employee's ability to mediate stress and cope with change is directly proportional to the amount of participation allowed by management. This advocates that via instituting group meetings, which express the need for change and allow participation in planning, management can go to great lengths in reducing the negative effects of change (Coch & French, 1948). Unfortunately, many change initiatives ignore organizational effects on employees and elicit support only after

the planning stages have been completed (Beruvides & Rossler, 1995). Such behavior by management results in organizations failing to institute lasting change because they have not made sufficient use of those change facilitation strategies that are intrinsic to employee participation.

Given the information presented concerning participation in this literature review, it is reasonable to believe that employees value their inclusion in the change process. Not only do such inclusion strategies create benefit to the proposed change, but also participation as a change facilitation strategy allows workers to create a stake in the change and subsequently give them a vested interest in its success (Kotter & Schlesinger, 1979). Wanberg and Banas (2000) “suggested an employee’s sense of ownership over his or her job, organization, or a change process can play a role in either facilitating or impeding change” (p. 139). However, participation is not possible unless workers are given quality of information about the change initiative in order to formulate a constructive opinion. Therefore, the following subsection will look at quality of information and its necessity to the change process.

Quality of information. The worst mistake that any company going through a major change can make is not providing quality of information to employees about the implications inherent in the proposed change for the broader membership and for individuals personally (Larkin & Larkin, 1996). Therefore, “without a significant amount of information, employee ‘buy-in’ to the change effort will most likely suffer” (Kotter, 1995, p. 62). For that reason, the communication of ideas about the impending change helps employees see the need for and the logic of the change (Kotter & Schlesinger, 1979). According to Armenakis, Harris, and Feild (1999), “the degree to which

organizational members receive adequate information about the proposed change is a prime determinant of the nature of their ultimate commitment to the change process” (p. 104). Stanislao and Stanislao (1983) emphasize preparing the employees for change by providing as much quality of information as possible about the change. Decker, Wheeler, and Johnson (2001) advocate explaining to employees the benefits of the proposed change because such action may not only increase acceptance but also create participation in the change initiative.

The literature supports that quality of information about the impending change to personnel will induce cooperation or participation and reduce resistance to change (Decker, Wheeler, & Johnson, 2001; Kotter & Schlesinger, 1979). Employees often perceive any information, negative or positive, as more helpful than no information at all (Larkin & Larkin, 1996; Miller & Monge, 1985). More specifically, Miller, Johnson, and Grau (1994) propose that “unless the negative outweighs the positive, any blend of positive and negative information should result in a better understanding of evolving work conditions and might increase willingness to participate in change” (p. 65). The literature essentially conveys the idea that ambiguity perceived by the employee has worse implications for the change process than presenting the employee with bad news. Hence, for employees to have a favorable perception and create readiness for change, the information concerning the change “must be seen as timely, useful, and answering questions” (Miller & Monge, 1985). Such information will reduce change anxiety and increase employee participation (Miller, Johnson, & Grau, 1994). Ideally, the message of change should come in the form of a “case for action” and a “vision statement” (Armenakis, Harris, & Feild, 1999; Hammer & Champy, 2001) or through written facts

and face-to-face communication (Larkin & Larkin, 1996). Whatever the method used to convey the message, it is vital that the source be seen as credible and has a good relationship with those affected by the change (Armenakis, Harris, & Feild, 1999; Kotter, 1995; Larkin & Larkin, 1996). A study by Ulmer and Malone (1970) conducted during a time when the U.S. Army was undergoing change brought upon by inefficiencies discovered during the Vietnam conflict illustrates how important credible information is to the stability of an organization. The Ulmer and Malone study concluded that a lack of honest information between superiors and subordinates, and vice versa, contributed to a state of corruption and mistrust that rocked the fundamental fabric of the organization. This corruption included, but was not limited to, such activities as the promotion system and even the upholding of the Army's time honored core values.

While the literature is repetitive about having a credible source for the change message, there is also concern for the method of delivery of the change message. Stanislaw and Stanislaw (1983) forewarn of making the "mistake of under estimating the grapevine as a source of information or misinformation to employees if given nothing better" (p. 75). Furthermore, information "is transmitted through both words and actions, with the latter being more significant; nothing undermines change more than behavior [by change agents] who's actions are inconsistent with their words" (Kotter, 1995, p. 64). Stanislaw and Stanislaw (1983) "advise that any proposed changes that a company is preparing to make should be delayed until all employees who will be affected by it have received accurate information about how the change will relate to them and their jobs" (p. 77). Therefore, any perceived change initiative must include a plan for communicating quality of information in such a way that ambiguity may be minimized.

However, regardless of how participatory the change initiative is or how much quality of information is divulged to the organizational membership, no single method or composite effort of change facilitation strategies is going to work the same way on every individual in the company. Managers must realize that as humans, each worker has “individual differences caused by a person’s unique genetic inheritance, as well as by personal experiences and culture,” (Nicholson, 1998, p. 136) which works to create an individual’s personality. Therefore, this current study supports, as do other previous studies, that individuals can be expected to respond differently to environmental stimuli dependent on inherent and cultural based personality characteristics. In the next section, this literature review will discuss the concept of personality and the link to change by presenting that individuals are unique due to a spectrum of differentiating personality traits. First, the section will provide a brief overview of personality and then the section will present the personality traits included in this study with a series of subsequent subsections going into more detail of the personality traits individually.

Personality and the Link with Change

The literature suggests, “that apart from beliefs, perceptions and attitudes which are critical in successful organizational change, there are some individual difference variables, such as personality traits that seem to differentiate individual [readiness for] change” (Vakola, Tsaousis, & Nikolaou, 2004, p. 91). However, the concept of personality is very ambiguous and difficult to define. According to Organ and Bateman (1991), personality seems to reflect on the internal characteristics that make individuals distinctive. Psychologists identify *trait theory* as a way to measure and explain the concept of personality (Feldman, 2000). Trait theorists contend that every individual has

the same arsenal of traits; however, the degree to which each trait applies to a particular individual is likely to vary causing each individual's personality to be unique (Feldman, 2000). Therefore, "there is strong evidence to believe that individuals within organizations experiencing the same change situation may react differently to that change based on characteristics of change agents as well as those of their own" (Jung, 2003, p. 9). Lau and Woodman (1995) present a similar idea in that attitudes toward change depends on an individual's change schemata which is described as "mental maps representing knowledge structures of change attributes and relationships among different change events" (p. 538). Lau and Woodman (1995) further argue that there is a relationship between such schemata (which is affected by personality) and the readiness of individuals with respect to change.

However, researchers in the field of personality construct measurement have not been able to agree on a consistent repository of personality attributes to be measured. Furthermore, oftentimes researchers focus in on one particular aspect of the human personality in their studies by examining only one trait, other times researchers almost seem to put together an ad hoc list of personality traits to capture as much as possible of the full spectrum of possible behaviors. Case in point, Judge, Thoresen, Pucik, and Welbourne (1999) in the course of conducting their research with respect to the impact of personality on an individual's ability to cope with change have assembled such an elaborate list of personality traits. The Judge et al. (1999) list includes such personality traits as locus of control, generalized self-efficacy, self-esteem, positive affectivity, openness to experience, tolerance for ambiguity, and risk aversion. However, some researchers have managed to agree on a specific set of personality traits known as the

five-factor model for personality. The five-factor personality model is composed of the traits: neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Vakola, Tsaousis, & Nikolaou, 2004). While many personality traits seem to measure clear and distinct spectrums of personality, some have a tendency to overlap each other. Furthermore, it is important to note that the various personality traits are often times recognized and labeled by an assortment of names further complicating the issue of categorization.

The personality traits included in this study have been well documented and are of particular relevance to the studying of perceptions with respect to change. Specifically, researchers have found locus of control, one's perception to control what happens to one's self with respect to environmental forces, may be related to one's receptivity to change (Anderson, 1977; Anderson, Hellriegel, & Slocum, 1977; Callan, Terry, & Schweitzer, 1994; Rotter, 1966; Organ & Bateman, 1991; Wanberg & Banas, 2000). Researchers have also concluded that positive affect (the tendency to exhibit high energy and seek interpersonal interaction) and negative affect (the tendency to experience such feelings as anxiety, insecurity and distress) would be related to change (Chemers, Watson, & May, 2000; George, 1990; Organ & Bateman, 1991; Watson & Clark, 1984; Watson & Clark, 1997; Watson, Clark, & Tellegen, 1988). Each of these three personality constructs; locus of control, positive affect, negative affect or their equivalents, which will be discussed in the following subsections, have been linked to individual reactions to organizational change in numerous research studies (Judge, Thoresen, Pucik, & Welbourne, 1999). Researchers seeking to capture and measure the human personality construct and its interaction with change have used these variables and

as such is a foundation for their inclusion in this current study. In the following three subsections the personality traits of locus of control, positive affect, and negative affect will be discussed in more detail.

Locus of control. Rotter (1966) described the concept of locus of control as being the extent to which a person perceives his or her ability to determine one's own destiny in a given environment. According to research cited by Judge, Thoresen, Pucik, and Welbourne (1999), "those individuals characterized by an internal locus of control believe they have control over their environment and their personal successes, whereas those with an external locus of control view their lives as controlled by external factors such as chance or powerful others" (p. 108). Previous research seems to indicate a connection between locus of control and the ability to cope with organizational change. Keenan and McBain (1979) determined that workers with external locus of control are not as probable to endure the ill effects of stressors of change. Ability to cope with stress being a possible cause, according to Organ and Bateman (1991), internal locus of control individuals "in general, perceive more order and predictability in their job-related outcomes and usually report greater overall job satisfaction" (p. 204). Hence, coping is an effort by the individual to learn to tolerate the threats that lead to stress such as change (Feldman, 2000). Furthermore, there is research that indicates that internal locus of control is a possible determinant of an individual's ability to cope with organizational change successfully, whereas, having an external locus of control can be seen as a hindrance to the change process (Anderson, 1977; Lau & Woodman, 1995; Nelson, Cooper, & Jackson, 1995).

Studies have begun to shed light on the difference between internal and external locus of control with respect to an individual's ability to cope with change. Judge, Thoresen, Pucik, and Welbourne (1999) conducted a study to determine if internal locus of control positively related to coping with organizational change. Judge et al. observed a statistically significant correlation between internal locus of control and successful coping with change, indicating that individuals who perceive themselves as being in control of their personal achievement are more likely to make the change effort because they have more confidence in their abilities to succeed. This finding reinforces past studies that have found individuals with internal locus of control are more informed about their respective occupations and experience less ambiguity about their jobs. While Organ and Greene (1974) found that individuals with internal locus of control experienced less ambiguity on the job, Keenan and McBain (1979) reported that both internal and external locus of control individuals "react to ambiguity with lowered satisfaction, only [individuals with external locus of control] show increased tension when ambiguity is high" (p. 283). Organ and Bateman (1991) also state that while both internal and external locus of control individuals "prefer to be supervised in a participative fashion, it matters more to internal locus of control individuals" (p. 204), because they place more importance on their own behavior therefore causing them to want to do tasks their own way. Such behavior can only lead researchers to have the impression that internal locus of control individuals and external locus of control individuals respond differently to their environments and change events present no exception for such divergent behavior.

An examination of the variation in behavior between both internal and external locus of control individuals in a natural setting is necessary to understand the differences.

A study by Anderson, Hellriegel, and Slocum (1977) examined how internal locus of control individuals versus external locus of control individuals responded differently in regards to major change situations. Anderson et al. conducted interviews with owners and managers of 102 businesses that received damage from flooding caused by Hurricane Agnes in 1972. The researchers were testing a model that emphasized the correlation between the individual's perceived stress level and his or her personality characteristics. Essentially, the authors argued that an individual's perceived stress level and personality characteristics will affect an individual's ability to cope with change. According to Anderson et al., individuals with internal locus of control characteristics perceived less stress than did individuals with external locus of control qualities. The data were collected through interviews taken eight months after the hurricane caused the damage. At the time of the interviews external locus of control individuals had still made no attempt at recovery while several internal locus of control individuals with similar damage to their businesses, caused by the hurricane, had made the necessary arrangements for repairs and were functioning at pre-hurricane operational capacities (Anderson et al., 1977). The Anderson et al. study further indicates that when it comes to internal locus of control individuals versus external locus of control individuals, internal locus of control individuals are more capable of adapting to rapid environmental changes whereas external locus of control individuals may not.

With these ideas in mind, locus of control is a necessary component of this study. As stated, the evidence suggests internal locus of control individuals could be more capable of withstanding higher levels of stress during change situations, whereas, external locus of control individuals may not. Therefore, while the element of stress is a

re-current and influential factor in everyday life, the ability to become accustomed to heightened stressful events may be essential for individuals to adjust to organizational change. In other words, without the ability to deal with high levels of stress (which is evident in external locus of control individuals) an individual's capacity to adapt could be diminished and possibly have a negative effect on the individual's ability incorporate change into their lives (Callan, Terry, & Schweitzer, 1994). Hence, it can be expected that locus of control should be a significant influential characteristic of an individual's propensity to develop readiness for change. However, locus of control is only one segment of the spectrum that makes up personality. In the following subsection, the construct positive affect and its benefit to this study will be discussed in-depth.

Positive affect. Positive affect "represents an underlying personality disposition typically manifested in characteristics such as well-being, confidence, energy, gregariousness, and affiliation; in general, it is associated with a positive worldview" (Judge, Thoresen, Pucik, & Welbourne, 1999, p. 109). Individuals with such qualities are not satisfied with the status quo, therefore, causing them to continue to strive to improve themselves and their surroundings (Goleman, 1998). Chemers, Watson, and May (2000) argue that high positive affect is associated with greater creativity, risk-taking, social influence, and negotiation skills. According to Watson and Clark (1997), people high in positive affect experience a state of pleasurable arousal, feelings of being actively and effectively engaged, and positive emotional states. Hence, high positive affect may be a prime determinant of overall well-being (George, 1990) and effects may include happiness, pronounced cheerfulness, and optimism about the future. In other words,

people with high positive affect may be more likely to have mastered their emotions and able to cope with change (Goleman, 1998).

Having reviewed literary evidence that asserts the significance of positive affect, it is reasonable to consider that having a high or low positive affect personality may influence a person's ability to develop readiness for change and subsequently deal with such change. A study by Carver and Scheier (1990) suggests support for why individuals experiencing high positive affect are more likely to respond more positively to change events in contrast to those individuals with a low positive affect personality. Carver and Scheier report that individuals are more prone to experience high positive affect if the discrepancies between "ideal" and "ought self" are relatively small. Carver and Scheier (1990) describe the "ideal self" as being what any individual strives to be in life, whereas, the "ought self" is more representative of an obligation and not particularly desired personally.

Therefore, given what the literature reports about positive affect, it would be permissible to assume that high positive affect, in contrast to low positive affect, is a characteristic of an individual who is capable of processing change quickly and easily adapting to new surroundings. It is conceivable that positive affect should be a significant influencing characteristic of an individuals' inclination to undergo change. However, positive affect and locus of control, together, may not be sufficient to control for the vast complexities of the personality construct. For that reason, the next subsection shall reveal the personality construct of negative affect and its value to this study.

Negative affect. Negative affect attempts to measure an individual's tendency to experience anxiety, guilt, tension, irritation, and other forms of emotional discomfort

(George, 1990; Organ & Bateman, 1991). Individuals who exhibit traits of high negative affect “are more likely to have a negative view of themselves, others, and the world around them” (George, 1990, p. 108). According to Organ and Bateman, individuals who score high in negative affect are sensitive to conditions of threat, which can be real or imagined. A person with high negative affect will have a much lower threshold for stimulating events that trigger emotional arousal in the forms of fear, guilt, or worry, resulting in the inability to cope in stressful situations (Watson & Clark, 1984; Watson, Clark, & Tellegen, 1988; George, 1990).

Additionally, Organ and Bateman (1991) assert that high negative affect individuals will experience “High Negative Affect Syndrome,” which often appears in the following ways: (a) a low tolerance for job ambiguity (i.e., a need for well-defined structure in all aspects of the job and therefore resistant to change), (b) a need for reassurance (i.e., which requires constant feedback to remain an effective worker), (c) an unstable, job-related self-esteem (i.e., experiences variable effects of success or failure), and (d) a sensitivity to threat (i.e., being thin-skinned when it comes to negative feedback). Shavit and Shouval (1977) offer one possible explanation for why individuals may have such a skewed negative view of themselves. They state that “sensitizers” (i.e., individuals whom exhibit high negative affect) tend to accept and internalize negative information regardless of its merits, thereby causing an exaggerated perceived disparity between “ideal self” and “ought self.” Furthermore, such people are less able to guard their self-esteem, hence viewing themselves negatively (Shavit & Shouval, 1977). Regardless of the reason, individuals exhibiting such behaviors may be less capable of

being a positive agent for change and may even aggressively campaign against the change.

The effects of high negative affect should not be underestimated. Watson and Clark (1984) have found that individuals who score high on negative affect are more likely to experience frustration throughout all aspects of life. These negative feelings seem to be manifested even in the absence of overt stress. Given previous findings, Goleman (1998) asserts that extreme negative emotion, such that is likely to be displayed by a high negative affect individual, is not beneficial to leading a change effort or leading in general. Aquino, Grover, Bradfield, and Allen (1999) uncovered some noteworthy results while conducting a study in an attempt to understand how individuals who reflect high negative affect interact with other individuals in the work place. Aquino et al. (1999) report that high negative affect is conducive to individuals expressing negative views of themselves and their situation, exhibiting hostile behavior, being perceived as a threat, and eliciting violent responses from fellow co-workers. Furthermore, high negative affect individuals have the propensity to interpret ambiguous information about change as threatening, thus causing them to react negatively (Aquino et al., 1999). Therefore, it is reasonable to consider that such feelings and behaviors are negatively related to an individual's propensity to accept change.

To an individual unfamiliar with the terms positive affect and negative affect, these measures might seem like direct opposites (i.e., strongly negatively correlated). However, researchers would argue, "they have in fact emerged as highly distinctive dimensions that can be meaningfully represented as orthogonal dimensions in factor analytic studies of affect" (Watson, Clark, & Tellegen, 1988, p. 1063). Studies cited in

Watson, Clark, and Tellegen (1988) have verified “positive affect and negative affect scales have low or non-significant correlations with one another” (p. 1063). According to Watson et al. (1988), positive affect is correlated to factors of the trait extraversion, while negative affect correlates to factors of the trait neuroticism, both of which are included in the five-factor model of personality. More specifically, “high positive affect is a state of high energy, full concentration, and pleasurable engagement, whereas low positive affect is characterized by sadness and lethargy” (Watson et al., 1988, p. 1063). Furthermore, Watson et al. describe negative affect as a “general dimension of subjective distress and unpleasurable engagement that subsumes a variety of aversive mood states, including anger, contempt, disgust, guilt, fear, and nervousness, with low [negative affect] being a state of calmness and serenity” (p. 1063).

Having covered literature that both embraces the change facilitation strategies that leaders may engage to help move change along and why there is reason to speculate that these change facilitation strategies will not work effectively on every individual due to unique combinations of personality characteristics, this literature review will now progress on to examine the implications of such a condition. This is necessary because inevitably every change initiative will experience some type of response from its organizational membership. Therefore, the following section will demonstrate the various behaviors that individuals may engage in which may give an inclination of the organizational members’ readiness for change. Secondly, the impact of change facilitation strategies on readiness for change will be examined. Thirdly, the included subsections will be devoted to detailing the constructs that this study purports may measure individuals’ readiness for the change process.

Readiness for Change

Many researchers would argue that the most demanding obstacle for companies to overcome revolves around human issues (i.e., resistance from employees) because employees are often fearful of the unknown (Hammer & Champy, 2001; Kotter & Schlesinger, 1979). The extent of an individual's readiness for change can be represented with a spectrum of responses, with commitment to change initiatives on one end of the spectrum, and resistance activities on the other end. Resistance to change is recognized as an individual's effort to retain the current state of the organization (Armenakis, Harris, & Feild, 1999) or an effort by the individual to protect his or her "self-interests and sense of self-determination" (Yukl, 2002, p. 275). Yukl (2002) provides a variety of reasons for why employees are resistant or have a low readiness for change. These reasons for resistance include: (a) lack of trust for change managers, (b) belief that the change is unnecessary, (c) belief that the change is not feasible, (d) economic threats to the individual employee, (e) relative high cost to benefit ratio, (f) fear of personal failure, (g) loss of status and power, (h) threat to values and ideals, and (i) resentment of interference by management. Kotter and Schlesinger (1979) offer their explanations for employee resistance, which are: (a) a desire not to lose something of value, (b) a misunderstanding of the change and its implications, (c) a belief that the change does not make sense for the organization, and (d) a low tolerance for change. Hence, people often reject change because of the comforts found in the stability of the known order of things, in contrast to the unknown, which often times elicits stress due to conceived uncertainties (Eadie, 1996). Alberts (2002) asserts that in order for change initiatives to be effective they must provide sufficient motivation to overcome worker complacency and increase readiness

for change.

Resistance to change is likely to be elusive for change agents to detect due to its various forms and degrees of strength. Resistance can range from passive to aggressive (Kotter & Schlesinger, 1979). Reger, Mullane, Gustafson, and DeMarie (1994) assert that passive resistance is a characteristic of not understanding the meaning of the proposed change, while active resistance is caused by perceived inconsistencies with the current organization's goals and values. Research cited in Holt (2002) reports that characteristics of passive resistance by subordinates may include procrastination, faked busyness, or partially completed tasks, while active resistance is evident by verbal resistance to tasks, requests for further guidance or even complete task avoidance. Furthermore, Maurer (1996) advocates that resistance to change can be detected by behaviors such as: (a) overt vocal disapproval, (b) malicious compliance or "behind your back" tactics, (c) easy agreement followed by strong rejection, (d) denial or a refusal to acknowledge a need for change, and (e) a convenient display of confusion in every aspect of the intended change. Essentially, every change initiative is going to have its advocates (i.e., those that support the change), early adopters, late adopters, and resisters; therefore, change agents must take measures to reward supporters and adapters, while at the same time discouraging resisters (Alberts, 2002). However, Henry (1997) professes "that resistance can and does serve a function in organizations; it should not be feared or suppressed, but rather viewed as a normal phenomena" (p. 145). An organization's equilibrium often depends on a reasonable amount of resistance from its members because without such behavior organizations would lack general stability due to frivolous

change proposals being implemented (Henry, 1997; Wanberg & Banas, 2000; Vakola, Tsaousis, & Nikolaou, 2004).

Low readiness for change that leads to negative responses to change may be an inherent part of human behavior. Nicholson (1998) states that the average person's initial reaction to resist such situations as change dates all the way back to the Stone Age when the human race was most certainly living under different and adverse living conditions. Researchers argue that even though the world has changed in many ways humans have not. Nicholson further suggests that while "human behavior exists along a continuum and may vary, the average person will react to change or threat in prescribed or consistent ways" (p. 139). Therefore, these primal, but still present, behaviors help to explain why people may not operate in the best interests of themselves and the organization in which they work (Nicholson, 1998). This also explains why change is difficult to implement due to human nature being notoriously associated with preserving the status quo or the current order of things and maintaining a low readiness for change. Nicholson (1998) reports that because of the desire of humans to remain habitual and immune to change, significant dissatisfaction with the current situation is a key requirement in raising readiness for change and gaining commitment to change.

This literature review has included many authors that have prescribed various avenues for change agents to curb resistance. However, these change facilitation strategies may only be as reliable as their effectiveness in creating readiness for change among affected employees (Armenakis, Harris, & Mossholder, 1993). In other words, studies indicate that resistance can be minimized by creating "readiness" or a positive view, which fosters compliance, of the change being implemented (Armenakis et al.,

1993). Hence, the propensity of an employee to react positively or negatively to change may be determined by his or her readiness for a specific change initiative (Holt, 2002). Parker (1997) states that readiness for change can be gauged by asking employees such questions as “Is the rate of current change in the organization appropriate?,” “Do you think the goals are achievable?,” and “Are you satisfied with your work?” In essence, readiness constructs attempt to measure an individual’s commitment to the change, thereby, predicting how an individual is likely to react to change. Armenakis, Harris, and Feild (1999) during the course of their research postulated that readiness for organizational change could be measured by the degree an individual’s perception leads him or her to believe that the change is “appropriate” for the organization (i.e., appropriateness), the change is possible by the individual (i.e., change-specific self-efficacy), and the change is personally beneficial (i.e., personal valence). With these ideas in mind, in the following subsections the readiness for change measures appropriateness, change-specific self-efficacy, and personal valence will be presented in more detail.

Appropriateness. Armenakis, Harris, and Feild (1999) advocate that readiness for change can be aided by the “discrepancy” message or properly conveying to the employee the need to change from the status quo to the ideal state of the organization. According to Armenakis et al. (1999), a key question often rationalized by employees is “Is the specific change being introduced an appropriate reaction to the discrepancy?” Hence, for the members of the organization to see the appropriateness of the change being presented to them, they must be properly and adequately “sold” on the advantages and benefits that the new order of business will bring. Therefore, high appropriateness

has been associated with the adoption of organizational change, whereas, low appropriateness may involve resistance (Armenakis et al., 1999). For the purpose of this study, appropriateness will be defined as the “extent to which one feels that the change effort was legitimate and appropriate for the organization to meet its objectives” (Holt, 2002, p. 205).

Change-specific self-efficacy. Armenakis Harris, and Feild (1999) argue that another dimension of readiness for change can be measured by exploring another question that creates uncertainties about change for employees. The question centers on being capable of making the appropriate necessary changes in one’s behavior. Armenakis et al. (1999) state that a question that employees often ask themselves during change is “Can I/we successfully implement the change?” Positive change-specific self-efficacy is a semblance of readiness for change because it signifies the confidence that an individual has in oneself or the group to complete the desired changes (Holt, 2002). According to Wanberg and Banas (2000), “employees may be reluctant to incorporate new procedures, technology, or other changes into their work if they are anxious about their ability to perform their job after the change” (p. 139). Conner (1992) reports that employee confidence is essential to successfully changing behavior. Therefore, this confidence on the part of the individual employee must be present for change to occur (Armenakis et al., 1999). For the purpose of this study change-specific self-efficacy will be defined as the “extent to which one feels that he or she is able to execute the tasks and activities that are associated with the implementation of the prospective change” (Holt, 2002, p. 127).

Personal valance. Armenakis, Harris, and Feild (1999) illustrate that organizational members will obviously want to know how the proposed changes will

benefit them. This is often revealed in the always-present question of employees asking themselves “What is in it for me?” Readiness for change will depend, in this instance, on how well levers of change are capable of conveying the intrinsic and extrinsic benefits of the change (Armenakis et al., 1999). Hence, workers will not put forth the effort to make the desired changes without adequate compensation. Therefore, personal valance will be defined as the “extent to which one feels that he or she will benefit from the implementation of the prospective change” (Holt, 2002, p. 129).

In sum, the three constructs discussed in the previous subsections (appropriateness, change-specific self-efficacy, and personal valance) are each potential measures of an individual’s readiness for change. These measures are important because, oftentimes, the extent to which an individual is ready for change is an accurate representation of how he or she will react, positively or negatively, to change (Holt, 2002). The following section will discuss the current study and how the literature has guided this study to the model being presented for testing.

Current Study

As the literature indicates, leaders are concerned with smoothly introducing changes so that the organization may quickly gain the benefits that come with the change. Undoubtedly, the smooth introduction of change is influenced by the change facilitation strategies used to encourage the adoption of the change. Further, it is plausible that individual characteristics may influence members’ readiness for the change process that is being used. As such, this study will utilize a model that will be beneficial to exploring a different way of looking at change in organizations by focusing not only on change

facilitation strategies but also on the impact that an individual's personality has on his or her readiness for the change process.

In order to accomplish the objectives of this research, this study will utilize ideas and models developed in research done by Armenakis, Harris, and Feild (1999) and by Holt (2002) as a foundation for the model presented and tested in this study. The model seeks to depict three components of the individual change process. The components of the change model include process, personality, and readiness for change. The process factor refers to the "how" or the way in which change agents implement the change (Holt, 2002). Again, process encompasses the specific change facilitation strategies leaders use to implement organizational change. The personality component of the model is the "who" that describes the organizational members that are required to make the change. According to Holt (2002), "these individual factors represent conditions internal to individuals that influence their beliefs, attitudes, intentions, and behaviors when confronted with change" (p. 30). The readiness for change dimension represents the "behavioral outcomes" or the actual behaviors that individuals may or intend to engage in to show their acceptance or rejection of the change initiative (Holt, 2002). Refer to Figure 3 for a depiction of the proposed model.

Having explained the components of the model, this study will examine the effect personality traits have on moderating the relationship between perceptions about the change facilitation strategies and the individual's readiness for that change. As a result, this study takes a micro-level approach to investigating the effects of using personality traits as moderating variables on the process of change and individual readiness for that change.

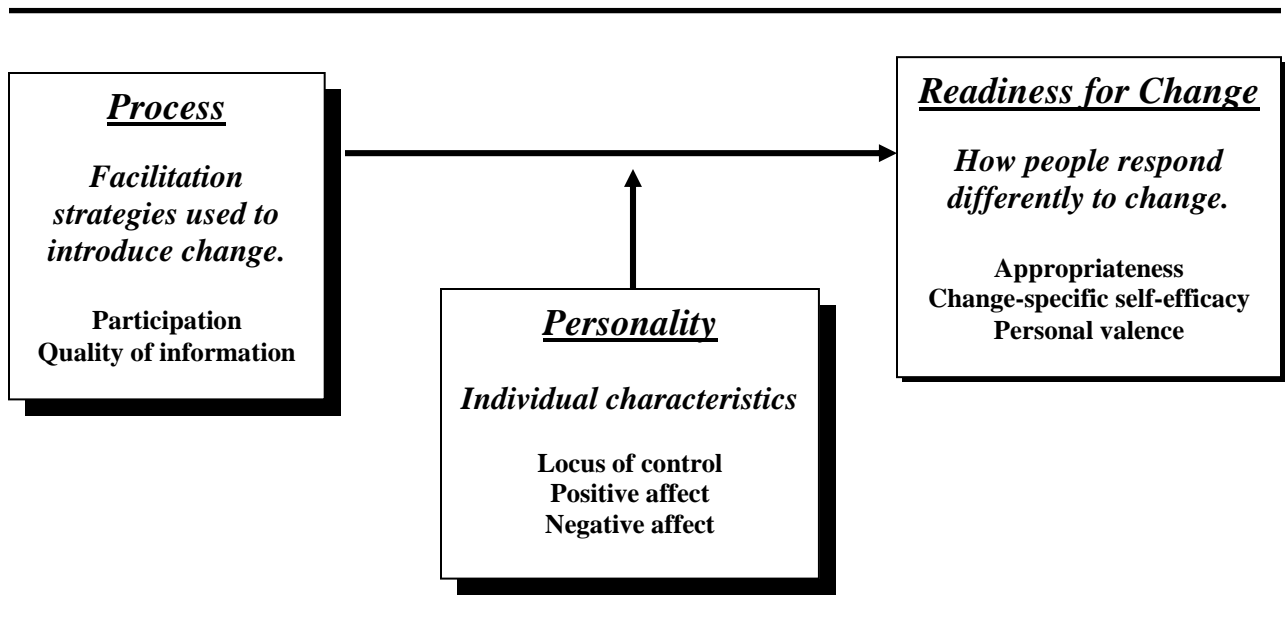


Figure 3. Personality Moderated Change Model

Summary of the Thesis

This chapter presented the literature background and the subsequent model that will be used to guide the remainder of this study. The remaining document includes three parts. Chapter 2 describes the methods that were used to measure the study's variables, the setting where the data were collected, and the data analysis techniques. The data are analyzed and results of these analyses are discussed in Chapter 3. Finally, the conclusions of this study are presented in Chapter 4.

II. Methodology

The methodology used in this study is quantitative in nature. The purpose of this study, as identified previously, is to examine the relationships between individuals' perceptions of the change process, their personality traits, and their readiness for change. Consistent with previous research (Baron & Kenny, 1986; Ciarrochi, Deane, & Anderson, 2002; Daly, 1995; Judge, 1993; Newton & Keenan, 1990; Salas & Jentsch, 1996; Smith-Jentsch, Payne, Sher, & Lee, 2003; Stone-Romero & Anderson, 1994; Vakola, Tsaousis, & Nikolaou, 2004; Wanberg & Banas, 2000) the use of moderated multiple regression to conduct the statistical analysis was chosen.

Background

The data used to conduct the research in this thesis were taken from two larger studies on organizational change. Both studies were questionnaire-based. One study involved a United States sample and the other a Korean. The US sample was gathered as a part of dissertation research done by Holt (2002). The primary purpose of Holt's research was to develop valid and reliable questionnaire variables to measure readiness for change within an organization. This was accomplished by collecting data through two questionnaires from the same US sample at two different times. The Korean sample was gathered for a master's thesis conducted by Jung (2003). The purpose of Jung's research was to explore how change content, individual attributes, context, and change process factors impact organizational readiness for change. The US sample and Korean samples obtained from Holt and Jung were deemed appropriate for this study because they provide relevant data from members whose organizations were undergoing

significant change. The following sections will provide a detailed examination of the organizations sampled and procedures used by Holt and Jung, the variables included in the current study, and how the data will be analyzed to answer the research questions posed in this study.

Sample Procedures and Participants

United States Sample

Procedure. The US sample was taken from a Department of Defense organization that developed and fielded information systems. According to Holt (2002), the original sample, collected from the administration of two questionnaires, consisted of 264 employees that were members of a large Department of Defense organization. The current study only used data from 132 of the original respondents who participated in both questionnaires because of missing data points. Due to the availability of the World Wide Web, Holt states that the participants from the organization based in the United States were administered two web-based questionnaires. The first questionnaire was made available approximately six weeks prior to the implementation of the major organizational changes, with data collection being finalized three weeks prior to the implementation of the proposed changes. The second questionnaire was administered in identical fashion seven months later. In order to maximize the response rate, many of the strategies recommended by Simsek and Veiga (2000) for bolstering the response rate of electronic questionnaires were utilized. Such methods include giving advance notice of the questionnaire via an electronic message, distributing the web address or link to the questionnaire to each organizational member via an e-mail message, and providing verbal announcements of the questionnaire during the weekly manager's meetings. In addition,

follow-up messages were sent on two occasions after each questionnaire's release. Furthermore, according to Holt (2002) the web-based questionnaire included a number of "extras" to make the questionnaires more convenient for participants. For instance, keyboard strokes were minimized (i.e., with the exception of final comments, all open-ended items were accompanied with "pull down menus" listing available options). In addition, because of the questionnaire's length, the questionnaire was configured in such a way that organizational members could complete a portion of the questionnaire, save their work, and complete the remaining portion at a different time as they could with a traditional paper-and-pencil questionnaire. In addition, organizational members that did not feel comfortable completing an on-line version of the questionnaire were offered the option to print a traditional paper version so that they could complete it and return it directly to the researcher.

Participants. Of the respondents, males represented 100% of the sample, the age of the average participant was 47.1 years, and 62% of the respondents had attained a Bachelor's degree or higher. According to Holt (2002), comparisons were conducted between respondents who participated in both questionnaires and those who only responded to either the first or the second questionnaire. A series of t-test comparisons were performed to ascertain whether there was any type of response bias in the sample. These comparisons showed that there was no difference in responses between those that participated in both questionnaires or those who participated in only the first or the second questionnaire. Further, a comparison was conducted with respect to the gender and the age of the respondents and non-respondents to each questionnaire. The larger study by Holt found, as did Iverson (1996) and Vakola, Tsaousis, and Nikolaou (2004),

no difference with respect to gender and attitudes toward change. Specifically, the US data results yielded no significant differences in relation to gender, age, or non-response to any of the constructs used in this study. Therefore, non-response bias will not be considered an influencing factor in the reduced US sample used in this study.

Korean Samples

Sample one.

Procedure. Members of a Women's Military School and Women's Battalion were selected to participate in the collection of Korean sample one. According to Jung (2003), the survey tool consisted of a paper-and-pencil questionnaire that was given in a group setting during duty hours. Jung further states that the participants were given a face-to-face briefing as to the nature of the study. The instructions prior to the survey's distribution included such directions as "do not include names or any other identifiable information." Participants were also given the researcher's contact information just in case there were any future questions or concerns.

Participants. The survey sampled 280 female soldiers with a response rate of 89%. Respondents averaged 28.3 years of age, with 56.4% having attained a Bachelor's degree. Various professions were sampled such as infantry, education, and supply.

Sample two.

Procedure. The second Korean sample was taken from a male Army Artillery School and a male Infantry Company. According to Jung (2003), the second Korean sample data were collected with the same questionnaire as the first Korean sample, but rather than a group setting, the questionnaire was distributed and returned via mail.

Participants. The sample consisted of 181 male soldiers and was completed with an 81% response rate. However, three respondents were eliminated from the data set because of insufficient data to measure one or more constructs, resulting in the sample size being reduced to 178. The respondents reflected a mean of 30.5 years of age, 94% had a Bachelor's degree, and the only career fields represented in the sample were infantry and artillery.

Change Context

US organization. While the US organization under study was a part of the Department of Defense, it was not composed primarily of uniformed military members. The organization was comprised of at least 95% civilian contractors with the remaining being uniformed military personnel. In an effort to fulfill its mission more effectively and efficiently, the organization's senior leadership had initiated an organization-wide restructuring initiative. The initiative was marketed to lower level employees as "Organize for Success," and was intended to clarify lines of authority and reduce redundant functions thereby facilitating higher performance and quality service. After the new organization structure was to be developed, the executive director agreed to implement the specified refinements to the organization six months later. While only a limited number of members were involved in the organization restructuring initiative, the new structure was said to affect all organizational members.

Korean organizations. Jung (2003) reports the Korean Department of Defense initiated organizational changes in order to operate more efficiently and effectively. The initiatives included the consolidation of some organizations considered redundant within the Korean Army. In particular, the Women's Military School and Women's Battalion

were required to be integrated into the Men's Military School and Unit. Jung (2002) expected this integration of units to cause a considerable amount of confusion and resistance because of cultural precedence of having the women and men separated in the Korean military. This situation provided a suitable scenario to examine individuals' readiness for change within an organization.

Measures

Having had examined the procedures and participants of this study, it is now important to cover the particulars of the questionnaires utilized. This section will discuss the variables that were included in the questionnaires and measured for completing the research objectives for this study.

Readiness for Change Variables

Appropriateness. According to Holt (2002), appropriateness "measures the extent to which one feels that the change effort was legitimate and appropriate for the organization to meet its objectives" (p. 205). The ten items developed by Holt were used to measure the appropriateness of the change. These items produced a coefficient alpha of .95 for the US sample, and .84 for the Korean samples.

Change-specific self-efficacy. Holt (2002) asserts that change-specific self-efficacy "measures the extent to which one feels that he or she has the skills and is able to execute the tasks and activities that are associated with the implementation of the prospective change" (p. 127). Six items were developed by Holt to measure this variable. The estimate of internal consistency or coefficient alpha for the US sample was .83 while the Korean samples registered a coefficient alpha of .83 as well.

Personal valence. Holt (2002) reasons that personal valence “measures the extent to which one feels that he or she will benefit from the implementation of the prospective change” (p. 129). Three items were developed by Holt to measure the variable of personal valence. The coefficient alpha was .62 for the US sample and .64 for the Korean sample.

Personality Variables

Locus of control. The seven-item inventory of questions to measure locus of control was developed by Pearlin, Lieberman, Menaghan, & Mullan (1981) to measure the extent to which respondents are inclined to believe that they have the ability to control their environment. High scores indicate feelings of control over the environment and potential success whereas low scores indicate the feeling that external factors influence the ultimate outcome of any situation. For the US sample, the coefficient alpha was .78 and for the Korean sample, it was .68.

Positive affect and negative affect. Watson, Clark, and Tellegen (1988) developed the positive affect and negative affect scales. These two ten-item scales include items that reflect positive affect (the extent to which respondents are disposed to feel a variety of favorable mood states to include enthusiastic, interested, and proud) and negative affect (the extent to which respondents are disposed to feel a variety of aversive mood states that include anger, contempt, disgust, fear, and nervousness). The US and Korean questionnaires utilized Watson, Clark, and Tellegen’s original 5-point response scale (1 = very slightly or not at all to 5 = extremely) to capture the extent to which individuals perceived these feelings. By asking participants to indicate the extent to which they “generally feel this way, that is, how they feel on average” (Jung, 2003),

dispositional affect was tapped. Watson et al. found that the internal consistencies of these two scales during the course of their research were acceptably high, ranging from .86 to .90 for positive affect and from .84 to .87 for negative affect. For the US sample, the coefficient alpha was .91 for positive affect and .85 for negative affect, whereas the Korean samples' coefficient alphas were .80 for positive affect and .89 for negative affect.

Change Facilitation Strategy Variables

Participation. The four-item scale developed by Wanberg and Banas (2000) was used to measure participation. This scale tapped the extent to which one felt that he or she had input and participated in the change process. In their research, Wanberg and Banas measured an estimated internal consistency of .79 for this construct. For the US sample, the coefficient alpha was .78, whereas the coefficient alpha of the Korean sample was .71.

Quality of information. Miller, Johnson, and Grau (1994) developed a three-item scale to assess the usefulness of information presented about organizational change and the value associated with that information. Miller et al. (1994) found the three items to reflect an estimated internal consistency of .86 during the course of their research. The coefficient alphas for quality of information among the US sample was .82 and for the Korean samples .78.

Variable Summaries.

See Table 3 for a complete list of variables, their original sources, and their composite items. Refer to Table 4 for a composite list of internal consistency estimations for the variables previously discussed.

Table 3. Variables and Item Inventory

| Variable & Source | Items |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appropriateness Holt (2002) | Readiness for Change Items 1. It doesn't make much sense for us to initiate this change. (R) 2. I think that the organization will benefit from this change. 3. This change makes my job easier. 4. This change will improve our organization's overall efficiency. 5. There are legitimate reasons for us to make this change. 6. When this change is implemented, I don't believe there is anything for me to gain. (R) 7. There are a number of rational reasons for this change to be made. 8. In the long run, I feel it will be worth while for me if the organization adopts this change. 9. The time we are spending on this change should be spent on something else. (R) 10. This change matches the priorities of our organization. |
| Change-specific self-efficacy Holt (2002) | 1. I do not anticipate any problems adjusting to the work I will have when this change is adopted. 2. When we implement this change, I feel I can handle it with ease. 3. When I set my mind to it, I can learn everything that will be required when this change is adopted. 4. There are some tasks that will be required when we change I don't think I can do well. (R) 5. I have the skills that are needed to make this change work. 6. My past experiences make me confident that I will be able to perform successfully after this change is made. |
| Personal valence Holt (2002) | 1. I am worried I will lose some of my status in the organization when this change is implemented. (R) 2. This change will disrupt many of the personal relationships I have developed. (R) 3. My future in this job will be limited because of this change. (R) |
| Locus of control Pearlin, Lieberman, Menaghan, & Mullan (1981) | Personality Items 1. What happens to me in the future mostly depends on me. 2. I can do just about anything I set my mind to. 3. I have little control over the things that happen to me. (R) 4. There is really no way I can solve some of the problems of life. (R) 5. I often feel helpless in dealing with the problems of life. (R) 6. There is little I can do to change many of the important things in my life. (R) 7. Sometimes I feel that I'm being pushed around in life. (R) |
| Positive affect Watson, Clark, & Tellegen (1988) | 1. Interested 5. Strong 9. Active 2. Alert 6. Determined 10. Proud 3. Excited 7. Attentive 4. Inspired 8. Enthusiastic |
| Negative affect Watson, Clark, & Tellegen (1988) | 1. Irritable 5. Nervous 9. Jittery 2. Distressed 6. Guilty 10. Afraid 3. Ashamed 7. Scared 4. Upset 8. Hostile |
| Participation Wanberg & Banas (2000) | Change Facilitation Strategy Items 1. I was able to ask questions about this change 2. I was able to participate in the implementation of this change. 3. I had some control over the changes that were proposed. 4. If I wanted to, I could have had input into the decisions being made about our future programs. |
| Quality of information Miller, Johnson, & Grau (1994) | 1. The information I received about this change was timely. 2. The information I received about this change has adequately answered my questions. 3. The information I received about this change helped me understand the change. |

Note. (R) indicates that the questionnaire item was reversed scored before being analyzed in the regression analysis.

Table 4. Cronbach's Alpha Estimations for Variables

| <i>Variable</i> | US | Korean |
|-------------------------------|------|--------|
| Readiness for change | | |
| Appropriateness | 0.95 | 0.84 |
| Change-specific self-efficacy | 0.83 | 0.83 |
| Personal valence | 0.62 | 0.64 |
| Personality | | |
| Locus of control | 0.78 | 0.68 |
| Positive affect | 0.91 | 0.80 |
| Negative affect | 0.85 | 0.89 |
| Change facilitation strategy | | |
| Participation | 0.78 | 0.71 |
| Quality of information | 0.82 | 0.78 |

Validity and Reliability Considerations

Content and construct validity. Although this research analyzes data previously collected in other larger studies, it is still important to illustrate the various validity and reliability issues considered in the construction of the original questionnaire instrument (Boudreau, Gefen, & Straub, 2001). Each of the variables and the items included within the questionnaires utilized in this study have been shown to exhibit content and construct validity through repeated empirical research in the general field in which they were designed to measure (Holt, 2002; Miller, Johnson, & Grau, 1994; Pearlin, Lieberman, Menashan, & Mullan, 1981; Wanberg & Banas, 2000; Watson, Clark, & Tellegen, 1988). The internal consistency of each of the variables was estimated using coefficient alpha (Cronbach, 1951) and Table 4 provided the results of the coefficient tests conducted on each variable. The only variable to not meet the standard .70 suggested by DeVellis (1991) or Nunnally and Bernstein (1994) in both the US and Korean samplings was the variable personal valence; however, personal valence does meet an acceptable level with regards to a minimum coefficient alpha of .60 prescribed by Spector (1997) and Gliem and Gliem (2003).

Variable reliability. The reliability of the variables used in this study are also accordingly established by repeated testing and continual consistent results (Boudreau, Gefen, & Straub, 2001). Specifically, the readiness for change variables developed by Holt (2002), which have been utilized in no less than four questionnaires from the previous two larger studies, have generated essentially the same generally consistent coefficient alpha results in each case. The same can be seen in both the personality and change facilitation strategy or process variables as well.

Korean questionnaire translation. In an effort to maintain both validity and reliability with respect to the questionnaire when administrated to the Korean sample, Jung (2003) translated the Holt (2002) questionnaire from English into Korean. According to Jung, the Korean version of the questionnaire was then translated back to English by two other bilingual graduate students in order to determine if the translation captured the conceptual meaning rather than the literal meaning. The differences between the original US questionnaire and the back-translation were examined and these differences were resolved through group discussions. The goal of the researchers and translators was to capture as much as possible of the conceptual meaning of the English terms. However, Jung states that this required a slight modification of the items in order to obtain a sufficient translation.

Format of questionnaire. Jung states that while slightly different versions of the questionnaire were administered to the US sample and Korean samples, there was considerable overlap, with the main difference being that the Korean questionnaire included additional personality constructs that were not included in the US questionnaire, which was used as a basis for part of her research. Unless otherwise noted, participants

expressed their agreement with each item by choosing one of the seven response options (1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither, agree or disagree*, 5 = *slightly agree*, 6 = *agree*, and 7 = *strongly agree*). In addition, according to Jung (2003), in the interest of standardization, the response format of the Likert scales for certain constructs across the questionnaire had to be slightly modified from the original source. For example, 10-point and 5-point scales were modified to be presented as 7-point scales. Research indicates that modification of this type does not influence scale reliabilities (Matell & Jacoby, 1971).

Descriptive Statistics

Table 5 presents the means and the standard deviations of all the variables included in this study from both the US and Korean sample. The mean values listed in Table 5 were calculated by taking the average response to each of the individual variables and then taking the average of those averages to get the overall mean. As stated by Jung (2003), some significant differences can be seen between the US and Korean sample by comparing the mean averages. Some of these differences can be observed in the departure of mean score values for the change facilitation strategy or process variables. The US employees seemed to view the process more positively than the Korean participants did. For instance, according to Jung, the US sample reported a significantly higher quality of information about the change with a mean rating of 4.16 compared to the Korean sample's mean of 3.01. Furthermore, Jung comments that while both samples reported lower means of participation as compared to quality of information, 3.42 for the US sample and 2.91 for the Korean sample, the US sample still maintained a higher mean for participation. The US sample also showed a more positive attitude with respect to

change. Specifically, the US sample reported a lower negative affect mean average of 1.59 and posted a higher positive affect mean rating of 3.72, whereas, the Korean sample posted a mean of 2.01 for negative affect and 3.61 for positive affect.

Table 5. Mean and Standard Deviation Estimations for Variables

| Variable | US | | Korean | |
|-------------------------------|------|------|--------|------|
| | Mean | SD | Mean | SD |
| Readiness for change | | | | |
| Appropriateness | 4.44 | 1.01 | 3.75 | 0.88 |
| Change-specific self-efficacy | 5.43 | 0.95 | 4.31 | 0.88 |
| Personal valence | 4.91 | 1.16 | 4.22 | 0.72 |
| Personality | | | | |
| Locus of control | 5.34 | 0.91 | 5.20 | 0.55 |
| Positive affect | 3.72 | 0.72 | 3.61 | 0.55 |
| Negative affect | 1.59 | 0.52 | 2.01 | 0.67 |
| Change facilitation strategy | | | | |
| Participation | 3.42 | 1.23 | 2.91 | 1.17 |
| Quality of information | 4.16 | 1.32 | 3.01 | 1.20 |

Analytical Procedure

Regression analysis. To answer the investigative questions outlined in the introduction, this study will utilize several forms of regression. To answer investigative question one a simple linear regression model will be used to test the relationship between the change facilitation strategies or process variables and readiness for change variables. Investigative question two will be determined by conducting a multiple regression equation seeking to uncover the first-order effects that the change facilitation strategy or process and personality variables have on readiness for change. To answer investigative question three, this study makes uses of a statistical procedure known as moderated multiple regression (Aguinis, 2004; Baron & Kenny, 1986; Cohen & Cohen, 1983). Moderated multiple regression “allows researchers to make the inference of whether a moderating effect is present in the population based on sample data” (Aguinis,

2004). Essentially, moderated multiple regression provides a method to examine the implications or moderating affect that a moderator variable may have on the relationship between an independent variable and a dependent variable. A moderator variable provides conditional information as to “why” a certain variable may have a causal relationship with another variable (Aguinis, 2004). In the case of this study, the personality variables are examined to determine if there is statistical evidence to suggest that the relationship between the change facilitation strategies or process variables (i.e., independent variables) and the readiness for change variables (i.e., dependent variables) are moderated in some way by the personality variables (i.e., moderator variables). Rather than combining all the variables of each component of the model into a single moderated multiple regression test, the analysis will include a series of moderated multiple regressions which take one variable from each component of the model presented in Figure 3 and tests them against each other individually. This statistical procedure is carried out by conducting a three-step regression process that looks for specific key indicators that signal a moderating effect once the interaction term is included in the model (Baron & Kenny, 1986). The indicators of moderated multiple regression include: calculating t-values for coefficient significance; examining the signs of the b-values to determine the nature of the relationships; and evaluating the estimated variance explained or R^2_{adj} (i.e., an estimate of the variability explained in the model) as the three-step regression process is conducted and subsequently calculating the resulting ΔR^2_{adj} . If a significant positive change in R^2_{adj} is measured at the completion of the third step and the model is significant at $\alpha = .01$ level, supplying significant evidence to reject

the null hypothesis ($H_o : \beta_3 = 0$), this will signify a moderating effect (Aguinis & Pierce, 1999). The fourth investigative question will be answered by using simple linear regression to test the personality variables against the readiness for change variables directly in order to determine if there is a relationship between personality and an individual's readiness for change. The subsequent subsections will precisely outline how the investigative questions will be answered using the regression analysis.

Investigative question one. As restated from the introduction, investigative question one asks: "To what extent are perceptions of the process used to introduce change related to individuals' readiness for change?" This question will be answered by conducting a simple linear regression model that includes the equation: $Y = a + b_1 X_1$, where X_1 represents the individual change facilitation strategy or process variable. The first step of this regression process will include the testing of each process variable, namely both participation and quality of information, against each readiness for change variables (i.e., appropriateness, change-specific self-efficacy, and personal valance). The statistical indicators at this point will be whether the various regression models are significant at the $p < .01$ level with regards to a t-test and an F-test. This step will also establish a valance or r_{adj}^2 base line for comparison for the next regression step. Based on this, the first hypothesis, H1, is as follows.

H1: There is a significant relationship between the process used to encourage change and the individuals readiness for change.

Investigative question two. Investigative question two seeks to determine "Collectively, how does the change process and the individuals' personality characteristics directly effect readiness for change?" This question will be answered by

conducting a multiple regression analysis that involves the equation: $Y = a + b_1X_1 + b_2X_2$, where X_1 represents the individual change facilitation strategy or process variable and X_2 represents the individual personality variable. This ordinary least-squares regression equation tests for first-order effects (Aguinis, 2004). Essentially, the second step of this regression process involves testing each of the process variables (participation and quality of information) separately with each of the personality variables (locus of control, positive affect, and negative) directly against each of the readiness for change variables (appropriateness, change-specific self-efficacy, and personal valance). After this step, the statistical indicators are whether a t-test of the β coefficients and an F-test yields the model significant at the $p < .01$ level and an increase in variance or ΔR_{adj}^2 is measured. A significant positive increase in R_{adj}^2 would indicate that the change process and personality attributes do provide more information about readiness for change beyond the process variables alone. Based on this, the second hypothesis, H2, is as follows.

H2: The process used to encourage change and personality factors have significant first-order effects on an individual's readiness for change.

Investigative question three. Investigative question three explores “To what extent is the relationship between the perceptions of the process used to introduce change and the readiness for that change moderated by personality?” The multiple regression equation that will be used to examine this question is: $Y = a + b_1X_1 + b_2X_2 + b_3X_1X_2$, where X_1 represents the individual change facilitation strategy or process variable, X_2 represents the individual personality variable, and X_1X_2 represents the created interaction term of the individual process variable times the individual personality

variable. This step requires the creation of a new variable produced by the product between the independent and moderator variable (Aguinis, 2004). This third step or moderated multiple regression involves bringing together the first-order effects of the individual process variables and the individual personality variables with the addition of an interaction term that carries information about the moderating effect of personality (Aguinis, 2004). See Figure 4 for a depiction of how each of the personality variables will be tested for their moderating influence on the relationship between the process and readiness for change variables. It is important to note, as Figure 4 shows, this analysis will examine one relationship at a time among the various combinations of each process, personality, and readiness for change variable. What will be investigated evidence of, given an investigation of the many relationships, that personality does moderate some relationships between process and readiness of change. In the final step, the statistical indicators are if the many interactions of the model remain significant at the $p < .01$ level with regard to a t-test of the β coefficients and if the addition of an interaction term produces another measured increase of ΔR_{adj}^2 . Aguinis and Pierce (1999) specify that having evidence to reject the null hypothesis ($H_o : \beta_3 = 0$) “indicates the presence of a moderating or interaction effect” (p.2). A significant increase in ΔR_{adj}^2 will also indicate that personality has a moderating effect on the relationship between the process of change and readiness for change. According to Evans (1985), “a rough rule would be to take 1% [increase] variance explained as the criterion as to whether or not a significant interaction exists in the model” (p. 320). Furthermore, after a moderating effect has been observed, examining the b-value will allow the determination of the nature of the relationship. The

sign of the b-value (+ or -) for the product term indicates what type of influence the moderator variable has on the relationship between the independent variable and the outcome variable. If the b-value is positive, the interpretation is that for every 1-unit increase in the moderator variable, the relationship between the independent variable and the outcome variable increases positively in the amount of the b-value (Aguinis, 2004). If the b-value is negative, the interpretation is for every 1-unit increase in the moderator variable, the relationship between the independent variable and the outcome variable increases negatively in the amount of the b-value. Thus, the relationship between the independent and outcome variable is moderated by the value of the moderator variable (Aguinis, 2004). Based on this, the third hypothesis, H3, is as follows.

H3: The relationship between the process used to encourage change and a person's readiness for change is moderated by an individual's personality.

Investigative question four. The fourth investigative question will attempt to examine "To what extent does individuals' personality relate to readiness for change?" This question will be answered by conducting a simple linear regression model, which will explore the relationship that each personality variable has on each individual readiness for change variable. The statistical indicators for investigative question four are whether the model is significant at the $p < .01$ level for both a t-test and an F-test, and if the r_{adj}^2 values indicate an informative modeling of readiness for change. Based on this, the forth hypothesis, H4, is as follows.

H4: There is a significant relationship between personality and an individual's readiness for change.

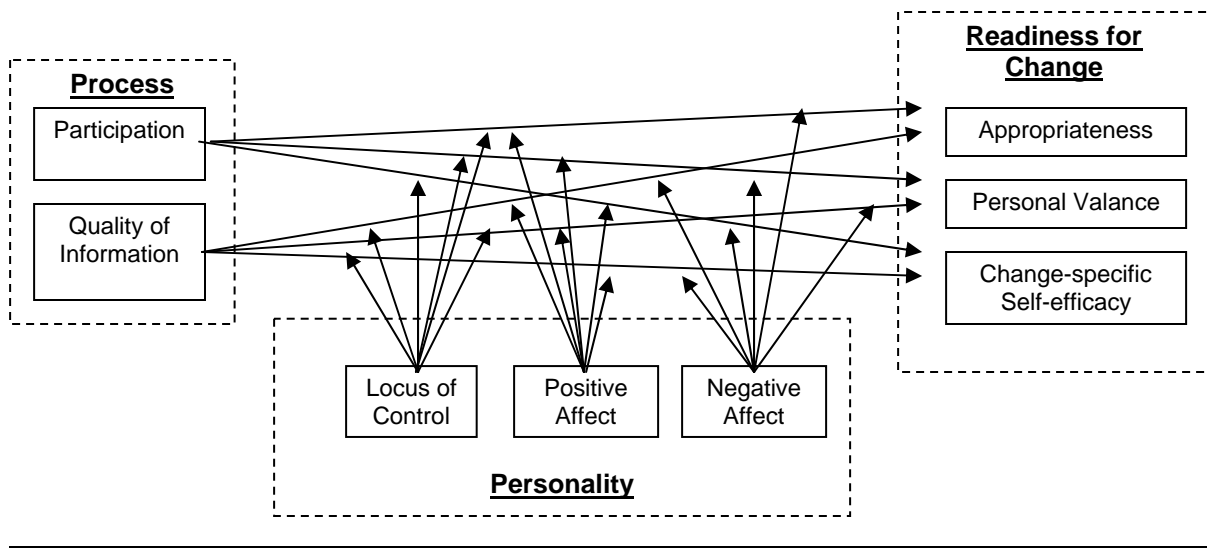


Figure 4. Depiction of Research Framework

Summary

The purpose of this chapter was to provide an explanation of the methods used to accomplish the research objectives. First, this chapter discussed the organizations from which the data were collected. Second, the chapter described the procedures used to collect the data. Third, the chapter provided an overview of the scales included in this study. Finally, the procedures that will be utilized to analyze the data were discussed. The next chapter will make available the results of this study, which will include statistical evidence for answering the main research question and each investigative question.

III. Results

This chapter presents the regression analysis results of this research study that was executed on the questionnaire data collected by Holt (2002) and Jung (2003). The purpose of this study, as identified previously, was to examine the various relationships between individuals' perceptions of the change process, their personality traits, and their readiness for change. In this chapter the investigative questions analysis results are examined in detail. As specified in the methodology, this study uses a stepwise regression process to observe investigative questions one, two, and three. Investigative question four is analyzed via a simple linear regression model. The Statistical Package for the Social Sciences (or SPSS) version 12.0 was used to analyze the data. The subsequent sections address separately each of the research investigative questions.

The Results for Investigative Question One

Investigative question one sought to determine "To what extent are perceptions of the process used to introduce change related to individuals' readiness for change?" Research hypothesis 1 states that there is a significant relationship between the process used to encourage change and an individual's readiness for change. Research hypotheses 1 was investigated by conducting a simple linear regression analysis of the change facilitation strategy or process variables and their first-order effects on the readiness for change variables. This regression analysis allowed a determination of whether evidence exists to suggest that there is a significant relationship between the change process variables and the readiness for change variables, which will lend support for research hypothesis 1. This was also the first step of the hierarchical regression procedure that allowed the examination of investigative question two. The results of this regression

analysis for both the US and Korean data is provided in Table 6. The next two subsections will discuss the findings in more detail for each sample.

Table 6. First-order Effects of Process on Readiness for Change

| Readiness variable (DV) | Process variable (IV) | β coefficient & t-statistic in parentheses | | F | r_{adj}^2 |
|-------------------------------|------------------------|--------------------------------------------------|---------------|---------|-------------|
| | | Constant | Process term | | |
| US Sample | | | | | |
| Appropriateness | Participation | 3.44(14.08*) | 0.29(4.35*) | 18.90* | 0.120 |
| | Quality of information | 3.44(12.77*) | 0.24(3.87*) | 14.99* | 0.096 |
| Change-specific self-efficacy | Participation | 4.75(19.87*) | 0.20(3.00*) | 9.03* | 0.058 |
| | Quality of information | 4.66(17.91*) | 0.19(3.11*) | 9.69* | 0.062 |
| Personal valence | Participation | 3.89(13.54*) | 0.30(3.78*) | 14.23* | 0.092 |
| | Quality of information | 3.73(11.98*) | 0.29(4.00*) | 15.96* | 0.102 |
| Korean Sample | | | | | |
| Appropriateness | Participation | 3.39(44.11*) | 0.12(5.48*) | 30.04* | 0.060 |
| | Quality of information | 2.69(27.40*) | 0.35(11.61*) | 134.86* | 0.227 |
| Change-specific self-efficacy | Participation | 4.00(51.86*) | 0.11(4.71*) | 22.19* | 0.044 |
| | Quality of information | 3.76(34.89*) | 0.18(5.50*) | 30.30* | 0.060 |
| Personal valence | Participation | 4.22(64.80*) | 0.00(-0.06) | 0.00 | -0.002 |
| | Quality of information | 4.50(49.59*) | -0.09(-3.31*) | 10.95* | 0.021 |

Note. * $p < .01$.

US sample

In the US sample, each of the simple linear regression models tested for a relationship between the change facilitation strategy or process variables and the readiness for change variables uncovered significant results. The β coefficients and their associated t-statistic of the models were examined and an F-test was conducted on each of the models to determine if the model was significant in modeling readiness for change at the $\alpha = .01$ level. Therefore, the F-test null hypothesis ($H_0 : \beta_1 = 0$) was only rejected in those instances where the significance level remained below $\alpha = .01$. The results of the F-test provide statistical evidence to whether or not the step-one regression models are significant (McClave, Benson, & Sincich, 2001) in modeling readiness for change. Each of the models tested in the US sample indicated that all the t-statistics for their associated β coefficients of the models were non-zero and significant at the $\alpha = .01$ level. Further,

sufficient evidence was present to reject the F-test null hypothesis for each of the models at the $\alpha = .01$ significance level. While the r_{adj}^2 explained by any of the US models did not exceed .12, each of the models did however capture enough variance to remain significant (McClave et al., 2001). This evidence gathered from the US sample indicates that the process variables do contribute information for modeling the readiness for change variables. Therefore, the results found in the US sample support research hypothesis 1, validating that there is a significant relationship between the change process and readiness for change variables. However, with the lower r_{adj}^2 values for each of the US models, it is apparent that there are other factors that need to be explored in order to explain more of the variance concerning readiness for change.

Korean sample

The Korean sample also presented statistically significant results concerning investigative question one. Again, the β coefficients and associated t-statistic of the models were examined and an F-test was preformed on each of the models to test for significance in modeling readiness for change. Each of the models, with the exception of one, resulted in the regression coefficients significant at the $\alpha = .01$ level. Furthermore, sufficient evidence was uncovered to reject the F-test null hypotheses ($H_0 : \beta_1 = 0$) at the $\alpha = .01$ level for each of the Korean models, with the exception of one. The only Korean model that did not achieve significance at the $\alpha = .01$ level was the model testing participation's relationship with personal valence. This model resulted in evidence of a non-significant relationship. However, the remaining contingent of models for the Korean sample, as do the US sample, suggest that there is evidence that the perception of

the process used to enact change may have an effect on an individual's readiness for change. The Korean models also exhibited the same low r_{adj}^2 as the US sample but did remain significant. Therefore, the Korean analysis results also support research hypothesis 1, indicating that there is a significant relationship between the change process and the individual's readiness for change. However, the low r_{adj}^2 values for the models indicate that there are other factors that need to be added into our investigation in order to explain fully an individual's readiness for change; therefore, the next investigative question will look at the combined effects of the change process and the personality attributes on an individual's readiness for change.

The Results of Investigative Question Two

The second investigative question attempted to determine "Collectively, how does the change process and the individuals' personality characteristics directly affect readiness for change?" Research hypotheses 2 states that the process used to encourage change and personality factors have significant first-order effects on an individual's readiness for change. To answer hypotheses 2, a multiple linear regression analysis was performed to determine the combined effects of the change process and personality variables and their relationship with readiness for change. This analysis was the second step in the hierarchical regression process that will provide necessary information in answering investigative question three. Refer to Table 7 for a complete list of results from both the US and Korean samples. The subsequent subsections will address the analysis results from the respective samples for investigative question two individually.

Table 7. First-order Effects of Change Process and Personality on Readiness for Change

| Readiness variable (DV) | Process variable (IV) | Personality variable (IV) | β coefficient & t-statistic in parentheses | | | F | R ² _{adj} |
|-------------------------------|------------------------|---------------------------|--------------------------------------------|---------------|------------------|--------|-------------------------------|
| | | | Constant | Process term | Personality term | | |
| US Sample | | | | | | | |
| Appropriateness | Participation | Locus of control | 2.66(5.26*) | 0.27(3.96*) | 0.16(1.74) | 11.10* | 0.134† |
| | | Positive affect | 3.48(7.84*) | 0.29(4.26*) | -0.01(-0.13) | 9.38* | 0.113 |
| | | Negative affect | 3.51(9.88*) | 0.29(4.33*) | -0.04(-0.27) | 9.42* | 0.114 |
| | Quality of information | Locus of control | 2.66(5.13*) | 0.22(3.46*) | 0.16(1.76) | 9.17* | 0.111† |
| | | Positive affect | 3.28(6.87*) | 0.24(3.81*) | 0.05(0.41) | 7.53* | 0.091 |
| | | Negative affect | 3.49(9.17*) | 0.24(3.85*) | -0.28(-0.18) | 7.46* | 0.090 |
| Change-specific self-efficacy | Participation | Locus of control | 2.59(5.71*) | 0.13(2.20) | 0.45(5.45*) | 20.34* | 0.228† |
| | | Positive affect | 3.09(7.76*) | 0.13(2.16) | 0.51(5.00*) | 17.84* | 0.204† |
| | | Negative affect | 5.58(16.74*) | 0.19(3.06*) | -0.51(-3.42*) | 10.73* | 0.129† |
| | Quality of information | Locus of control | 2.54(5.56*) | 0.12(2.26) | 0.44(5.41*) | 20.52* | 0.230† |
| | | Positive affect | 2.82(6.76*) | 0.16(2.92) | 0.53(5.36*) | 20.21* | 0.227† |
| | | Negative affect | 5.49(15.57*) | 0.18(3.08) | -0.50(-3.34*) | 10.80* | 0.130† |
| Personal valence | Participation | Locus of control | 1.69(3.01*) | 0.23(3.09*) | 0.46(4.47*) | 18.16* | 0.208† |
| | | Positive affect | 3.13(6.05*) | 0.27(3.35*) | 0.23(1.78) | 8.82* | 0.107† |
| | | Negative affect | 4.85(12.09*) | 0.29(3.85*) | -0.59(-3.30*) | 13.12* | 0.156† |
| | Quality of information | Locus of control | 1.59(2.82*) | 0.22(3.28*) | 0.45(4.42*) | 18.88* | 0.214† |
| | | Positive affect | 2.75(5.07*) | 0.27(3.84*) | 0.28(2.20) | 10.63* | 0.128† |
| | | Negative affect | 4.69(11.07*) | 0.28(4.00*) | -0.58(-3.21) | 13.70* | 0.162† |
| Korean Sample | | | | | | | |
| Appropriateness | Participation | Locus of control | 4.40(11.42*) | 0.12(5.35*) | -0.19(-2.67*) | 18.80* | 0.072† |
| | | Positive affect | 3.43(27.81*) | 0.12(5.47*) | -0.01(-0.33) | 15.05* | 0.058 |
| | | Negative affect | 3.37(24.55*) | 0.12(5.42*) | 0.01(0.23) | 15.02* | 0.058 |
| | Quality of information | Locus of control | 3.49(9.65*) | 0.35(11.43*) | -0.15(-2.30) | 70.70* | 0.234 |
| | | Positive affect | 2.76(21.39*) | 0.35(11.63*) | -0.02(-0.81) | 67.29* | 0.226 |
| | | Negative affect | 2.68(18.80*) | 0.35(11.57*) | 0.01(0.14) | 67.70* | 0.225 |
| Change-specific self-efficacy | Participation | Locus of control | 3.05(7.88*) | 0.11(4.88*) | 0.18(2.51*) | 14.36* | 0.055† |
| | | Positive affect | 3.95(31.99*) | 0.11(4.71*) | 0.01(0.60) | 11.22* | 0.043 |
| | | Negative affect | 4.29(31.41*) | 0.11(4.98*) | -0.15(-2.56*) | 14.51* | 0.080† |
| | Quality of information | Locus of control | 2.72(6.87*) | 0.19(5.76*) | 0.20(2.73*) | 19.10* | 0.073† |
| | | Positive affect | 3.73(26.36*) | 0.18(5.49*) | 0.01(0.76) | 15.17* | 0.058 |
| | | Negative affect | 4.03(25.98*) | 0.19(5.68*) | -0.14(-2.43) | 18.25* | 0.070† |
| Personal valence | Participation | Locus of control | 3.93(11.96*) | 0.0(-0.01) | 0.06(0.90) | 0.41 | -0.003 |
| | | Positive affect | 4.22(40.45*) | 0.00(-0.06) | 0.00(0.04) | 0.00 | -0.004 |
| | | Negative affect | 4.27(36.76*) | 0.00(-0.01) | -0.03(-0.49) | 0.12 | -0.004 |
| | Quality of information | Locus of control | 4.29(12.78*) | -0.09(-3.24*) | 0.04(0.64) | 5.67* | 0.020 |
| | | Positive affect | 4.48(37.65*) | -0.09(-3.31*) | 0.00(0.15) | 5.50* | 0.019 |
| | | Negative affect | 4.52(34.43*) | -0.09(-3.28) | -0.01(-0.29) | 5.50* | 0.019 |

Notes. * $p < .01$. † indicates a minimum of .01 increase of variance explained over the first step regression models.

US sample

The US sample showed significant results with respect to the testing of the collective effects of the process variables and the personality variables on modeling the readiness for change variables. Again, in addition to the β coefficients and their

associated t-statistic being examined, an F-test was performed on the US sample models in order to evaluate their significance in modeling readiness for change. Of the eighteen separate multiple linear regression tests performed on the various combinations of change process, personality, and readiness for change variables, the F-test results indicated that all eighteen US models were significant at the $\alpha = .01$ level. These eighteen models presented sufficient evidence to reject the F-test null hypothesis ($H_0 : \beta_1 = \beta_2 = 0$); therefore, indicating that the process used to induce change and personality attributes has a significant relationship in modeling readiness for change. However, through closer examination of the regression coefficients it can be observed that only four models indicate significance of those measures at the $\alpha = .01$ level for both the change process term and the personality term. The evidence presented from the F-test and t-statistics alone is not enough to support hypothesis 2. From examination of the ΔR_{adj}^2 more support can be established. The addition of the personality variable into the US model tests did account for a significant measure of increase in variance explained. This accounted for fourteen of the eighteen US models reporting at least a 1% increase in variance explained beyond the effects of the change process variables alone. Therefore, the US sample results do support hypothesis 2. However, the R_{adj}^2 values did remain relatively low with the span of variance being explained by the US models ranging from approximately 7.5% to 21%. This evidence seems to indicate that there remains to be other factors that would be helpful in modeling a person's readiness for change.

Korean sample

From viewing Table 7 it is apparent that the Korean analysis results offered

dissimilar results to the US findings. Again, the β coefficients and corresponding t-statistic were evaluated and an F-test was executed on the Korean models to evaluate the relationship between the combined effects of the change process and personality on readiness for change. The F-test results indicate that fifteen Korean models show sufficient evidence to reject the F-test null hypothesis ($H_0 = \beta_1 = \beta_2 = 0$); signifying reason to conclude that the combined effects of the change process and personality have a significant relationship with readiness for change. However, only four Korean models indicated significant regression coefficients at the $\alpha = .01$ level for both the change process term and the personality term. At first glance, the Korean data seems to support a significant relationship between the combined effects of the change process and personality variables on an individual's readiness for change. However, unlike the US models, only five out of eighteen models, including the presence of the personality variables, resulted in a 1% increase in variance explained over the process variables alone. Therefore, the Korean sample results did not support hypothesis 2. Not being able to account for 75% or more of variance for readiness for change in all the Korean models and similar results in the US data, led this study to go one more step further in order to attempt to capture more of the variability concerning an individual's readiness for change.

The Results of Investigative Question Three

Investigative question three sought to examine "To what extent is the relationship between the perceptions of the process used to introduce change and readiness for that change moderated by personality?" Research hypotheses 3 states that the relationship between the process used to encourage change and a person's readiness for change is

moderated by an individual's personality. To investigate hypotheses 3, this study makes use of the inferential procedure referred to as moderated multiple regression. To determine the strength of the moderating relationship between process, personality, and readiness for change, it was necessary to conduct the third step of this hierarchical regression process, also known as the moderated multiple regression model. Again, as covered in the methodology, this evidence is only possible by creating a product variable or interaction term formed by the independent variable and the moderating variable. According to Evans (1985) the statistical significance of the moderator can be determined by comparing the R_{adj}^2 from investigative question three results (i.e., including the first-order effects and the interaction term) and investigative question two results (i.e., including the first-order effects of the process and personality variables only). The difference in ΔR_{adj}^2 between the two models indicates the proportion of variance in the readiness for change variables explained by the interaction effect beyond the proportion of variance explained by the first-order effects alone (Aguinis, 2004). In addition, it was deemed important to examine the β coefficients and the t-values in order to determine that the regression coefficients were non-zero and significant, which would provide evidence to reject the null hypothesis ($H_o : \beta_3 = 0$). Table 8 provides the results of the US sample and Table 9 displays the results of the analysis produced from the Korean sample. Both tables combine the results of all three-regression step models that complete the three step hierarchical multiple regression process for each of the overall models tested. The following subsections will detail the results found in both the US and Korean sample.

Table 8. Results of the Moderated Regression Analysis for US Sample

| Readiness variable (DV) | Step | Independent variable | β coefficient & t-statistic in parentheses | | | | R^2_{adj} | ΔR^2_{adj} |
|-------------------------|------|----------------------|--------------------------------------------------|--------------|------------------|-----------------|-------------|--------------------|
| | | | Constant | Process term | Personality term | Moderation term | | |
| APP | 1 | P | 3.44(14.08*) | 0.29(4.35*) | | | 0.120 | |
| | 2 | LOC | 2.66(5.26*) | 0.27(3.96*) | 0.16(1.74) | | 0.134 | 0.014 |
| | 3 | P X LOC | 2.33(1.66) | 0.37(0.91) | 0.22(0.87) | -0.02(-0.26) | 0.127 | -0.007 |
| APP | 1 | P | 3.44(14.08*) | 0.29(4.35*) | | | 0.120 | |
| | 2 | PA | 3.48(7.84*) | 0.29(4.26) | -0.01(-0.13) | | 0.113 | -0.007 |
| | 3 | P X PA | 3.95(2.78) | 0.16(0.38) | -0.13(-0.36) | 0.04(0.34) | 0.107 | -0.006 |
| APP | 1 | P | 3.44(14.08*) | 0.29(4.35*) | | | 0.120 | |
| | 2 | NA | 3.51(9.88*) | 0.29(4.33*) | -0.04(-0.27) | | 0.114 | -0.006 |
| | 3 | P X NA | 3.61(4.54*) | 0.26(1.21) | -0.11(-0.23) | 0.02(0.15) | 0.107 | -0.007 |
| APP | 1 | QOI | 3.44(12.77*) | 0.24(3.87*) | | | 0.096 | |
| | 2 | LOC | 2.66(5.13*) | 0.22(3.46*) | 0.16(1.76) | | 0.111 | 0.015 |
| | 3 | QOI X LOC | 3.18(2.50*) | 0.08(0.23) | 0.07(0.29) | 0.03(0.45) | 0.105 | -0.006 |
| APP | 1 | QOI | 3.44(12.77*) | 0.24 (3.87*) | | | 0.096 | |
| | 2 | PA | 3.28(6.87*) | 0.24(3.81*) | 0.05(0.41) | | 0.091 | -0.005 |
| | 3 | QOI X PA | 5.15(3.78*) | -0.23(0.48) | -0.45(0.21) | 0.12(0.15) | 0.099 | 0.080 |
| APP | 1 | QOI | 3.44(12.77*) | 0.24(3.87*) | | | 0.096 | |
| | 2 | NA | 3.49(9.17*) | 0.24(3.85*) | -0.28(-0.18) | | 0.090 | -0.006 |
| | 3 | QOI X NA | 3.64(4.34*) | 0.20(1.05) | -0.12(0.81) | 0.02(0.84) | 0.083 | -0.007 |
| CSSE | 1 | P | 4.75(19.87*) | 0.20(3.01*) | | | 0.058 | |
| | 2 | LOC | 2.59(5.71*) | 0.13(2.20) | 0.45(5.45*) | | 0.228 | 0.170 |
| | 3 | P X LOC | 2.70(2.15) | 0.20(0.27) | 0.43(1.90) | 0.01(0.10) | 0.222 | -0.006 |
| CSSE | 1 | P | 4.75(19.87*) | 0.20(3.01*) | | | 0.058 | |
| | 2 | PA | 3.09(7.76*) | 0.13(2.16) | 0.51(5.00*) | | 0.204 | 0.146 |
| | 3 | P X PA | 2.46(1.93) | 0.32(0.88) | 0.67(2.04) | -0.05(-0.52) | 0.200 | -0.004 |
| CSSE | 1 | P | 4.75(19.87*) | 0.20(3.00*) | | | 0.058 | |
| | 2 | NA | 5.58(16.74*) | 0.19(3.06*) | -0.51(-3.42*) | | 0.129 | 0.071 |
| | 3 | P X NA | 6.40(8.62*) | -0.05(-0.22) | -1.07(-2.26) | 0.161(1.24) | 0.133 | 0.004 |
| CSSE | 1 | QOI | 4.66(17.91*) | 0.19(3.11*) | | | 0.062 | |
| | 2 | LOC | 2.54(5.56*) | 0.12(2.26) | 0.44(5.41*) | | 0.230 | 0.168 |
| | 3 | QOI X LOC | 4.30(3.87*) | -0.35(-1.26) | 0.12(0.59) | 0.09(1.74) | 0.241 | 0.011 |
| CSSE | 1 | QOI | 4.66(17.91*) | 0.19(3.11*) | | | 0.062 | |
| | 2 | PA | 2.82(6.76*) | 0.16(2.92*) | 0.53(5.36*) | | 0.227 | 0.165 |
| | 3 | QOI X PA | 2.72(2.27) | 0.18(0.64) | 0.55(1.76) | -0.01(-0.09) | 0.221 | -0.006 |
| CSSE | 1 | QOI | 4.66(17.91*) | 0.19(3.11*) | | | 0.062 | |
| | 2 | NA | 5.49(15.57*) | 0.18(3.08*) | -0.50(-3.34) | | 0.130 | 0.068 |
| | 3 | QOI X NA | 5.36(6.92*) | 0.21(1.16) | -0.42(-0.92) | -0.02(-0.18) | 0.124 | -0.006 |
| PV | 1 | P | 3.89(13.54*) | 0.30(3.77*) | | | 0.092 | |
| | 2 | LOC | 1.69(3.01*) | 0.23(3.09*) | 0.46(4.47*) | | 0.208 | 0.116 |
| | 3 | P X LOC | 0.01(0.01) | 0.76(1.66) | 0.76(2.72*) | -0.09(-1.16) | 0.210 | 0.002 |
| PV | 1 | P | 3.89(13.54*) | 0.30(3.77*) | | | 0.092 | |
| | 2 | PA | 3.13(6.05*) | 0.27(3.35*) | 0.23(1.78) | | 0.107 | 0.015 |
| | 3 | P X PA | 3.34(2.02) | 0.20(0.43) | 0.18(0.42) | 0.02(0.14) | 0.100 | -0.007 |
| PV | 1 | P | 3.89(13.54*) | 0.30(3.77*) | | | 0.092 | |
| | 2 | NA | 4.85(12.09*) | 0.29(3.85*) | -0.59(-3.30*) | | 0.156 | 0.064 |
| | 3 | P X NA | 5.74(6.40*) | 0.04(0.16) | -1.19(-2.09) | 0.17(1.10) | 0.158 | 0.002 |
| PV | 1 | QOI | 3.73(11.98*) | 0.29(4.00*) | | | 0.102 | |
| | 2 | LOC | 1.59(2.82*) | 0.22(3.28*) | 0.45(4.42*) | | 0.214 | 0.112 |
| | 3 | QOI X LOC | 2.14(1.54) | 0.08(0.21) | 0.35(1.36) | 0.03(0.43) | 0.209 | -0.005 |
| PV | 1 | QOI | 3.73(11.98*) | 0.29(4.00*) | | | 0.102 | |
| | 2 | PA | 2.75(5.07*) | 0.27(3.84*) | 0.28(2.20) | | 0.128 | 0.026 |
| | 3 | QOI X PA | 4.01(2.58*) | -0.04(-0.12) | -0.05(-0.13) | 0.08(0.87) | 0.126 | -0.002 |
| PV | 1 | QOI | 3.73(11.98*) | 0.29(3.99*) | | | 0.102 | |
| | 2 | NA | 4.69(11.07*) | 0.28(4.00*) | -0.58(-3.21) | | 0.162 | 0.060 |
| | 3 | QOI X NA | 5.48(5.90*) | 0.08(0.39) | -1.07(-1.95) | 0.12(0.96) | 0.162 | 0.000 |

Notes. Variable abbreviations: appropriateness (APP), change-specific self-efficacy (CSSE), personal valance (PV), participation (P), quality of information (QOI), locus of control (LOC), positive affect (PA), negative affect (NA). *p < .01.

US sample

The US sample results, given in Table 8, revealed little evidence of a moderating effect caused by personality on the relationship between the process variables and readiness for change variables. Upon close examination of the regression coefficients, it seems that none of the moderation terms indicated significance at the $\alpha = .01$ level, allowing the null hypothesis ($H_o : \beta_3 = 0$) of any of the US models to be rejected. The evidence suggests that the third step models, that included the interaction term, do not contribute significantly when modeling readiness for change. Subsequently, the ΔR^2_{adj} once the moderating terms were entered into each of the moderated multiple regression models revealed little to no evidence of a moderating effect. This was also evident from none of the US models satisfying the minimum of 1% increase in ΔR^2_{adj} (Evans, 1985) or variability explained from the second step, first-order models, to the third step models including the interaction term (Aguinis, 2004). In the US models, the ΔR^2_{adj} seemed to show a trend in many cases of actually explaining less variance when the moderating variable was added into the regression equations. In some US models, the ΔR^2_{adj} actually reported a negative value, which indicates that the models explained less variability (McClave, Benson, & Sincich, 2001) in relation to readiness for change when the interaction term was added. The results suggest that among the US sample, personality is not showing evidence of moderating the relationship between the change process and an individual's readiness for change; therefore, hypothesis 3 was not supported by the US sample results.

Table 9. Results of the Moderated Regression Analysis for Korean Sample

| Readiness variable (DV) | Step | Independent variable | β coefficient & t-statistic in parentheses | | | | R^2_{adj} | ΔR^2_{adj} |
|-------------------------|------|----------------------|--------------------------------------------------|---------------|------------------|-----------------|-------------|--------------------|
| | | | Constant | Process term | Personality term | Moderation term | | |
| APP | 1 | P | 3.39(44.11*) | 0.12(5.48*) | | | 0.060 | |
| | 2 | LOC | 4.40(11.42*) | 0.12(5.35*) | -0.19(-2.67*) | | 0.072 | 0.012 |
| | 3 | P X LOC | 2.44(2.53*) | 0.75(2.64*) | 0.17(0.96) | -0.12(-2.23) | 0.080 | 0.008 |
| APP | 1 | P | 3.39(44.11*) | 0.12(5.48*) | | | 0.060 | |
| | 2 | PA | 3.43(27.81*) | 0.12(5.47*) | -0.01(-0.33) | | 0.058 | -0.002 |
| | 3 | P X PA | 3.48(9.04*) | 0.10(0.57) | -0.02(0.83) | 0.01(0.14) | 0.056 | -0.002 |
| APP | 1 | P | 3.39(44.11*) | 0.12(5.48*) | | | 0.060 | |
| | 2 | NA | 3.37(24.55*) | 0.12(5.42*) | 0.01(0.23) | | 0.058 | -0.002 |
| | 3 | P X NA | 2.18(7.45*) | 0.53(5.76*) | 0.51(4.12*) | -0.17(-4.55*) | 0.097 | 0.039† |
| APP | 1 | QOI | 2.69(27.40*) | 0.35(11.61*) | | | 0.227 | |
| | 2 | LOC | 3.49(9.65*) | 0.35(11.43*) | -0.15(-2.30) | | 0.234 | 0.007 |
| | 3 | QOI X LOC | 5.58(6.47*) | -0.34(-1.30) | -0.56(-3.35*) | 0.13(2.66*) | 0.244 | 0.010† |
| APP | 1 | QOI | 2.69(27.40*) | 0.35(11.61*) | | | 0.227 | |
| | 2 | PA | 2.76(21.39*) | 0.35(11.63*) | -0.02(-0.81) | | 0.226 | -0.001 |
| | 3 | QOI X PA | 3.34(5.42*) | 0.19(1.10) | -0.18(-1.07) | 0.05(0.97) | 0.226 | 0.000 |
| APP | 1 | QOI | 2.69(27.40*) | 0.35(11.61*) | | | 0.227 | |
| | 2 | NA | 2.68(18.80*) | 0.35(11.57*) | 0.01(0.14) | | 0.225 | -0.002 |
| | 3 | QOI X NA | 2.31(7.24*) | 0.47(4.88*) | 0.19(1.26) | -0.06(-1.30) | 0.226 | 0.001 |
| CSSE | 1 | P | 4.00(51.86*) | 0.11(4.71*) | | | 0.044 | |
| | 2 | LOC | 3.05(7.88*) | 0.11(4.88*) | 0.18(2.51*) | | 0.055 | 0.011 |
| | 3 | P X LOC | 4.20(4.34*) | -0.26(-0.91) | -0.03(-0.18) | 0.07(1.30) | 0.057 | 0.002 |
| CSSE | 1 | P | 4.00(51.86*) | 0.11(4.71*) | | | 0.044 | |
| | 2 | PA | 3.95(31.99*) | 0.11(4.71*) | 0.01(0.60) | | 0.043 | 0.001 |
| | 3 | P X PA | 4.91(12.85*) | -0.35(-2.03) | -0.26(-2.45) | 0.13(2.67*) | 0.055 | 0.012† |
| CSSE | 1 | P | 4.00(51.86*) | 0.11(4.71*) | | | 0.044 | |
| | 2 | NA | 4.29(31.41*) | 0.11(4.98*) | -0.15(-2.56*) | | 0.056 | 0.012 |
| | 3 | P X NA | 3.34(11.38*) | 0.43(4.72*) | 0.24(1.95) | -0.13(-3.60*) | 0.080 | 0.024† |
| CSSE | 1 | QOI | 3.76(34.89*) | 0.18(5.50*) | | | 0.060 | |
| | 2 | LOC | 2.72(6.87*) | 0.19(5.76*) | 0.20(2.73*) | | 0.073 | 0.013 |
| | 3 | QOI X LOC | 5.46(5.82*) | -0.71(-2.52*) | -0.34(-1.87) | 0.18(3.22*) | 0.092 | 0.019† |
| CSSE | 1 | QOI | 3.76(34.89*) | 0.18(5.50*) | | | 0.060 | |
| | 2 | PA | 3.73(26.36*) | 0.18(5.49*) | 0.01(0.76) | | 0.058 | -0.002 |
| | 3 | QOI X PA | 3.29(4.86*) | 0.31(1.62) | 0.13(0.48) | -0.04(0.51) | 0.057 | -0.001 |
| CSSE | 1 | QOI | 3.76(34.89*) | 0.18(5.50*) | | | 0.060 | |
| | 2 | NA | 4.03(25.98*) | 0.19(5.68*) | -0.14(-2.43) | | 0.070 | 0.010 |
| | 3 | QOI X NA | 3.59(10.36*) | 0.33(3.12*) | 0.07(0.43) | -0.07(-1.40) | 0.072 | 0.002 |
| PV | 1 | P | 4.22(64.80*) | 0.00(0.95) | | | -0.002 | |
| | 2 | LOC | 3.93(11.96*) | 0.00(-0.01) | 0.06(0.90) | | -0.003 | -0.001 |
| | 3 | P X LOC | 5.86(7.15*) | -0.62(-2.56*) | -0.30(-1.99) | 0.11(2.57*) | 0.010 | 0.013† |
| PV | 1 | P | 4.22(64.80*) | 0.00(0.95) | | | -0.002 | |
| | 2 | PA | 4.22(40.45*) | 0.00(-0.06) | 0.00(0.04) | | -0.004 | -0.002 |
| | 3 | P X PA | 4.72(14.54*) | -0.24(-1.63) | -0.14(-1.58) | 0.07(1.64) | -0.001 | 0.003 |
| PV | 1 | P | 4.22(64.80*) | 0.00(0.95) | | | -0.002 | |
| | 2 | NA | 4.27(36.76*) | 0.00(-0.01) | -0.03(-0.49) | | -0.004 | -0.002 |
| | 3 | P X NA | 4.45(17.57*) | -0.06(-0.80) | -0.10(-0.95) | 0.03(0.82) | -0.005 | -0.001 |
| PV | 1 | QOI | 4.50(49.59*) | -0.09(-3.31*) | | | 0.021 | |
| | 2 | LOC | 4.29(12.78*) | -0.09(-3.24*) | 0.04(0.64) | | 0.020 | -0.010 |
| | 3 | QOI X LOC | 6.26(7.83*) | -0.74(-3.08*) | -0.34(-2.24) | 0.13(2.71*) | 0.034 | 0.014† |
| PV | 1 | QOI | 4.50(49.59*) | -0.09(-3.31*) | | | 0.021 | |
| | 2 | PA | 4.48(37.65*) | -0.09(-3.31*) | 0.00(0.15) | | 0.019 | -0.002 |
| | 3 | QOI X PA | 4.96(8.71*) | -0.23(-1.43) | -0.13(-0.83) | 0.04(0.86) | 0.019 | 0.000 |
| PV | 1 | QOI | 4.50(49.59*) | -0.09(-3.31*) | | | 0.021 | |
| | 2 | NA | 4.52(34.43*) | -0.09(-3.28) | -0.01(-0.29) | | 0.019 | -0.002 |
| | 3 | QOI X NA | 4.30(14.60*) | -0.20(-0.23) | 0.10(0.69) | -0.04(-0.85) | 0.019 | 0.000 |

Notes. Variable abbreviations: appropriateness (APP), change-specific self-efficacy (CSSE), personal valance (PV), participation (P), quality of information (QOI), locus of control (LOC), positive affect (PA), negative affect (NA). * $p < .01$. † indicates a minimum of .01 increase of variance explained over the second step regression models.

Korean sample

While the analysis on the Korean sample did not yield much more substantial results, there was however, evidence of a moderation effect taking place in seven out of the eighteen overall models tested. Therefore, upon examination of the regression coefficients, sufficient statistical evidence was determined to be present to reject the null hypothesis ($H_o : \beta_3 = 0$) for these seven models. These instances of a moderation taking place offer some evidence that personality may have a moderating effect on the relationship between process and readiness for change. Therefore, the findings of this analysis are significant and should be taken into consideration. Refer to Table 9 for a complete list of regression analysis results for the Korean sample.

Similar to the US findings, the Korean models displayed the same trend of having low R^2_{adj} values, with the amount of variability explained by the R^2_{adj} for the third step regression equations ranging from negative values to approximately 24%. The low R^2_{adj} indicates that these models are not accounting for a substantial amount of variability relating to readiness for change. Therefore, signifying that there are important factors that are interacting with readiness for change that go beyond the scope of this study's ability to take into account and explain. However, this study was able to uncover seven particular models that did show evidence of a moderating relationship between process, personality and readiness of change. These particular significant models will now be discussed in more detail.

Appropriateness scores were regressed onto participation scores, negative affect scores, and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 9.7% of the variance in appropriateness scores, with model significance at $\alpha = .01$ level. Examination of the product term revealed a significant negative interaction effect, $b_3 = -.955$, $t = -4.550$, $p < .01$. This suggests that as negative affect increases, the relationship between negative affect and participation becomes more negative. A moderating effect was recorded with a .039 increase in ΔR_{adj}^2 when the interaction term was added in the third step equation. This model indicates an instance where a personality variable is moderating the relationship between process and readiness for change.

Appropriateness scores were regressed onto quality of information scores, locus of control scores, and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 24.4% of the variance in appropriateness scores, with model significance at the $\alpha = .01$ level. Examination of the product term revealed a significant positive interaction effect, $b_3 = .942$, $t = 2.658$, $p < .01$. This suggests that as locus of control increases, the relationship between locus of control and quality of information becomes more positive. A moderating effect was recorded with a .01 increase in ΔR_{adj}^2 when the interaction term was added in the third step equation. This model indicates another instance where a personality variable is moderating the relationship between process and readiness for change.

Change-specific self-efficacy scores were regressed onto participation scores, negative affect scores, and a product term to reflect the interaction as predictors in the

model. Together, the predictors accounted for 8.0% of the variance in change-specific self-efficacy scores, adjusted $R^2 = .080$, $F(3, 454) = 14.254$, $p < .01$. Examination of the product term revealed a significant negative interaction effect, $b_3 = -.763$, $t = -3.604$, $p < .01$. This suggests that as negative affect increases, the relationship between negative affect and quality of information becomes more negative. A moderating effect was recorded with a .024 increase in ΔR^2_{adj} when the interaction term was added in the third step equation. This model indicates another instance where a personality variable is moderating the relationship between process and readiness for change.

Change-specific self-efficacy scores were regressed onto participation scores, positive affect scores, and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 5.5% of the variance in change-specific self-efficacy scores, with model significance at the $\alpha = .01$ level. Examination of the product term revealed a significant positive interaction effect, $b_3 = 1.044$, $t = 2.666$, $p < .01$. This suggests that as positive affect increases, the relationship between positive affect and participation becomes more positive. A moderating effect was recorded with a .012 increase in ΔR^2_{adj} when the interaction term was added in the third step equation. This model indicates another instance where a personality variable is moderating the relationship between process and readiness for change.

Change-specific self-efficacy scores were regressed onto quality of information scores, locus of control scores, and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 9.2% of the variance in change-specific self-efficacy scores, with model significance at the $\alpha = .01$ level. Examination

of the product term revealed a significant positive interaction effect, $b_3 = 1.250$, $t = 3.217$, $p < .01$. This suggests that as locus of control increases, the relationship between locus of control and quality of information becomes more positive. A moderating effect was recorded with a .019 increase in ΔR^2_{adj} when the interaction term was added in the third step equation. This model indicates another instance where a personality variable is moderating the relationship between process and readiness for change.

Personal valence scores were regressed onto participation scores, locus of control scores, and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 1.0% of the variance in personal valence scores, with model significance at the $\alpha = .01$ level. Examination of the product term revealed a significant positive interaction effect, $b_3 = 1.530$, $t = 2.568$, $p < .01$. This suggests that as locus of control increases, the relationship between locus of control and participation becomes more positive. A moderating effect was recorded with a .013 increase in ΔR^2_{adj} when the interaction term was added in the third step equation. This model indicates another instance where a personality variable is moderating the relationship between process and readiness for change.

Personal valence scores were regressed onto quality of information scores, locus of control scores, and a product term to reflect the interaction as predictors in the model. Together, the predictors accounted for 3.4% of the variance in personal valence scores, with model significance at the $\alpha = .01$ level. Examination of the product term revealed a significant positive interaction effect, $b_3 = 1.088$, $t = 2.713$, $p < .01$. This suggests that as locus of control increases, the relationship between locus of control and quality of

information becomes more positive. A moderating effect was recorded with a .014 increase in ΔR_{adj}^2 when the interaction term was added in the third step equation. This model indicates another instance where a personality variable is moderating the relationship between process and readiness for change.

Each of the seven models that revealed a significant moderating effect satisfied the minimum amount of ΔR_{adj}^2 (i.e., 1% increase) established by Evans (1985). While these seven significant cases fall short of providing convincing support for hypothesis 3, it does provide important evidence that there may be a moderating relationship between the process of change, personality attributes, and readiness for change.

The Results of Investigative Question Four

The fourth investigative question, as stated in the introduction, sought to examine “To what extent does individuals’ personality related to readiness for change?” Research hypothesis 4 proposes that there is a significant relationship between personality attributes and an individual’s readiness for change. Hypothesis 4 was investigated by conducting a simple linear regression analysis of the personality variables and their first-order effects on the readiness for change variables. The results of the regression analysis for investigative question four are provided in Table 10 for both the US sample and the Korean sample. While there is evidence that personality does have a relationship with readiness for change among the US sample, the analysis of the Korean sample seems to provide differing results. The following two subsections will discuss the results of the two samples separately and in more detail.

Table 10. First-order Effects of Personality on Readiness for Change

| Readiness variable (DV) | Personality variable (IV) | β coefficient & t-statistic in parentheses | | F | r^2_{adj} |
|-------------------------------|---------------------------|--------------------------------------------------|-------------------------|--------|-------------|
| | | <i>Constant</i> | <i>Personality term</i> | | |
| US Sample | | | | | |
| Appropriateness | Locus of control | 3.21(6.24*) | 0.23(0.10*) | 5.87* | 0.036 |
| | Positive affect | 4.12(9.25*) | 0.09(0.73) | 0.53 | -0.004 |
| | Negative affect | 4.52(15.96*) | -0.06(-0.33) | 0.11 | -0.007 |
| Change-specific self-efficacy | Locus of control | 2.86(6.46*) | 0.48(5.90*) | 34.83* | 0.205 |
| | Positive affect | 3.38(8.88*) | 0.55(5.49*) | 30.14* | 0.182 |
| | Negative affect | 6.25(24.29*) | -0.52(-3.37*) | 11.35* | 0.073 |
| Personal valence | Locus of control | 2.16(3.87*) | 0.517(5.01*) | 25.11* | 0.155 |
| | Positive affect | 3.71(7.33*) | 0.33(2.44*) | 5.93* | 0.044 |
| | Negative affect | 5.88(18.58*) | -0.61(-3.21*) | 10.30* | 0.066 |
| Korean Sample | | | | | |
| Appropriateness | Locus of control | 4.87(12.59*) | 0.22(-2.90*) | 8.43* | 0.016 |
| | Positive affect | 3.79(35.46*) | -0.01(-0.36) | 0.13 | -0.002 |
| | Negative affect | 3.66(28.09*) | 0.05(0.78) | 0.61 | -0.001 |
| Change-specific self-efficacy | Locus of control | 3.47(9.00*) | 0.16(2.17) | 4.71 | 0.008 |
| | Positive affect | 4.26(40.12*) | 0.01(0.48) | 0.23 | -0.002 |
| | Negative affect | 4.55(35.30*) | -0.12(-2.00) | 3.98 | 0.006 |
| Personal valence | Locus of control | 3.93(12.29*) | 0.06(0.91) | 0.82 | 0.000 |
| | Positive affect | 4.21(48.08*) | 0.00(0.04) | 0.02 | -0.002 |
| | Negative affect | 4.27(39.96*) | -0.03(-0.50) | 0.62 | -0.002 |

Note. * $p < .01$.

US sample

Each of the simple linear models tested on the US sample scores, except two models, seem to indicate that there is noteworthy reason to accept that personality may have a relationship with an individual's readiness for change. The significance of the models were evaluated through a standard t-test on the individual β parameters, an F-test, and an examination of the r^2_{adj} to determine if evidence of a relationship is present in any of the models. Only two US models did not reach a significance level of $\alpha = .01$ for both the t-test and the F-test. One of these models tested positive affects' relationship with appropriateness, while the other model tested negative affects' relationship with appropriateness. Seven models of a possible nine were found to provide significant evidence to reject the F-test null hypothesis ($H_0 : \beta_1 = 0$); this suggests that personality attributes may have a relationship with an individual's readiness for change. After

examining the r_{adj}^2 of each of the models it is apparent that few of the US models captured much variability with respect to the readiness for change variables. However, the findings of the US sample do offer support for hypothesis 4, which advocates that there is a significant relationship between an individual's personality attribute and his or her readiness for change.

Korean sample

While the results of the US data indicate a significant relationship between personality and the readiness for change variables, the Korean data results seem to provide evidence to the contrary. Again, a t-test and an F-test were preformed at the $\alpha = .01$ significant level to determine evidence for a relationship between personality attributes and readiness for change. Eight out of the nine possible Korean models resulted in a non-significance determination under both the t-test and the F-test significance restrictions. Resulting in only one model providing sufficient evidence to reject the F-test null hypotheses ($H_0 = B_1 = 0$). Furthermore, the r_{adj}^2 values for each of the Korean models were low and in most models a negative value was recorded. In this test, the Korean results differ from the US data, offering contradictory evidence to the findings of the US sample. Therefore, it was concluded that the Korean sample findings do not support research hypothesis 4, indicating a lack of evidence to support a significant relationship between personality and readiness for change.

Summary

The purpose of this chapter was to provide the analysis results that achieve the research objectives outlined for this study. This chapter methodically stepped through

the analysis results of each of the investigative questions for both the US and Korean data individually. Refer to Table 11 for a summary of the hypothesis findings. The next chapter will discuss the research conclusion, the limitations of this study, and possible follow-on ideas for future research in this area of study.

Table 11. Research Hypothesis Results

| Hypothesis | US | | Korean | |
|------------|-----------|---------------|-----------|---------------|
| | Supported | Non-supported | Supported | Non-supported |
| 1 | X | | X | |
| 2 | X | | | X |
| 3 | | X | | X |
| 4 | X | | | X |

IV. Discussion

The main purpose of this chapter is to present the conclusions drawn from the results uncovered in this research study. This chapter will also describe several possible limitations that might have influenced or limited the quality of the findings in this study. Future possible extensions to this research will also be proposed to provide guidance to those individuals seeking to uncover more of the unknown in this area of study. Finally, a summary will provide a short review of this study.

Research Conclusion

This present study attempted to examine the relationships among the change facilitation strategies or process used to introduce change, an individual's personality, and readiness for change. Furthermore, this study was conducted and the results compared between two different cultures. Overall, the principle research question, which asks the question: "Are individual perceptions of the change facilitation strategies used in the organizational change process moderated by individual personality traits in determining individual readiness for that change?," was not supported with conclusive evidence by either the US or Korean data. However, while the main research question was not supported conclusively the investigative questions taken individually did yield significant findings.

Investigative question one, which examined the relationship between the process variables and the readiness for change variables, uncovered suggestive evidence that the process used to introduce change does have an impact on an individual's readiness for change. The findings of this study were similar to research conducted by Wanberg and

Banas (2000) who uncovered evidence that higher levels of participation and quality of information, related to a proposed change, increases a worker's openness to change and thereby promoting a more positive outlook into the eventual benefits of a change event. Therefore, in light of the this study's findings and similar findings of other studies, it is important to take note that the change facilitation strategies or the process used to conduct change may have a significant impact on a change initiative's success. The fact that both the US sample and the Korean sample produce parallel evidence is a demonstration to the strength of the importance of the change process in relation to readiness for change.

Investigative question two, in examining the first-order effects of both process and personality's effects on readiness for change uncovered divergent results. The US models showed support for the significance of the combined first-order effects for the change process and personality attributes on readiness for change. However, the Korean sample provided little support for the change process and personality's direct effects on readiness for change. While it is evident that the US sample provides convincing support for hypotheses 2, the Korean sample provides no such confirmation. Therefore, only the US sample supports reason to speculate that there is a meaningful relationship between the two independent variables and readiness for change. This implies that the process used to induce change combined with the individual's personality attributes can provide US organizational leaders valuable information about how to proceed with a change effort in order to achieve a more smooth transition. These differences in results between the US and Korean samples may be the first indication of an underling consequence of cultural based influences.

The primary research question or investigative question three, which examined the moderating effect of personality on the relationship between process and readiness for change, was not decisively supported by either the US sample or the Korean sample. However, while the US sample provided no evidence of a moderating effect of personality, the Korean sample did offer some evidence that may allude to the possibility of a moderating effect under certain circumstances. The instances of moderation taking place within several of the Korean models indicate that personality can play a part in the relationship between the change process and readiness for change. Therefore, this research study contends that an individual's inherent and cultural induced personality disposition may play an influential role in successfully navigating change. Hence, organizational leaders should not be too hasty in implementing change initiatives without taking into consideration the unique individual.

Investigative question four provided divergent results between the two samples. The US sample findings indicate a significant relationship between the direct effect of personality and an individual's readiness for change, while the Korean sample seems to offer little support to conclude that personality is significant when it comes to readiness for change. The US sample results seem to draw a parallel with the findings of research conducted by Vakola, Tsaousis, and Nikolaou (2004) who discovered evidence that personality traits have a significant relationship with attitudes toward change. The Vakola et al. (2004) findings indicate that positive personality traits lead to a positive attitude towards change. Therefore, with the results of the US sample, it could be argued that hypothesis 4 is partially confirmed. On the contrary, the Korean sample does not agree with the US sample findings or the findings of Vakola et al. (2004). There are

many possible reasons for the divergent results between the US and Korean sample.

While it goes beyond the scope of this study to account for every feasible explanation of the conflicting results, there is one possibility that should be noted which directly pertains to the intentions of this study. The goal of this study was to examine across cultures in order to determine if a link could be drawn, which would reinforce the idea that human progression through change is effected in similar ways despite cultural variation.

However, this study seems to indicate as does research conducted by Hofstede (1980) that cultural diversity is a viable source of influence and should not be overlooked.

In sum, the research results were mixed when compared between the US and Korean sample. However, evidence was present to suggest that there are instances of significant relationships among change facilitation strategies or process, personality, and readiness for change.

Limitations

Like all research this study has its limiting factors. First, the data for both organizations was not collected under the same conditions. Specifically the data were taken at different times during the change process, which could be an influencing factor with respect to individual perceptions of the change process. Case in point, the data from the US sample was taken when the change was nearing implementation, so according to Jung (2003), participants “may have completely understood the necessity of the change and recognized the advantages presented by the change.” However, the Korean data were taken during the initial stages of the change process, therefore, giving rise to the possibility that they may have had a different perspective with respect to the change process being implemented in their own organization.

Another limitation has to do with the level of involvement allowed by the members of each organization. The respondents of the US sample indicated that they were allowed to take a relatively involved role in the change process by implementing many of its desired goals. In contrast, members of the Korean organization sampled in this study indicated that they played no significant role in the change process, which would include having no input or active involvement.

There were also no measures taken to control for cultural differences. According to Hofstede (1980), there are many inherent limitations in comparing cultures that are different on many levels of socialization. Hofstede (1980) presented that certain cultures may differ with respect to the idea of “power distance” and “individualism versus collectivism.” The state of power distance is the degree to which a country’s culture accepts power inequality within its organizations. Depending on the culture, the power distance between leader and follower could be small or large. Another dimension of culture differences could be measured by the continuum of individualism versus collectivism (Hofstede, 1980). In an individualistic culture, the norm is to believe that a person must take care of him or herself, thereby causing people to conduct themselves in their own best interests. In contrast, individuals in a collectivistic culture identify with the group for support and most actions are done in the interest of that group (Hofstede, 1980). In the course of his research, Hofstede uncovered evidence that the US population is more representative of being an individualistic culture with a small power distance, whereas, the Koreans show elements of a strong collectivistic culture with a large power distance. These differences may account for partial cause of contradictory analysis results.

The few number of personality attributes measured may have also limited this study as well. It is recognized by researchers of trait theory, which attempts to account for individual differences in personality, that individual behavior is complex and difficult to account for in absolute terms (Feldman, 2000). Therefore, it is important to note that it is possible that the full spectrum of personality attributes that humans exhibit were not entirely represented in this study due to only including the personality traits locus of control, positive affect, and negative affect. It also should be noted that the data in this study was collected through self-reports or personal perceptions of oneself. Researchers have found that personality is a more effective predictor or moderator when measured via objective observation rather than personal testimony (Mount, Barrick, & Strauss, 1994).

Another possible limitation of this study involves the use of discrete Likert scales as a method of measuring participant responses to the examined variables in this study. According to Russell and Bobko (1992), the use of discrete Likert scales in moderated multiple regression analysis may produce a loss of information that may affect the degree of recorded moderation interaction. Russell and Bobko (1992) report that the use of continuous line scales, rather than the traditional Likert type-scales, can cause the moderating effect to increase an average of 93%. Possible causation for the information loss in Likert scales can be contributed to participants only being allowed to register a number of fixed responses, which reduces the randomization of the measured response (Russell & Bobko, 1992). However, continuous line scales provide researchers with a higher degree of observed random response from participants; thereby, reducing unknown systematic error due to the loss of information. Continuous scales rather than

Likert scales could be incorporated into the research study in order to capture more variability and possibly account for more moderation effect.

Lastly, according to Aguinis (1995), moderated multiple regression is not an imperfect test. Aguinis (1995) states that researchers using moderated multiple regression should realize that “artifacts which may affect their conclusions regarding the moderator variable hypotheses, leading to the incorrect inference that there is no moderating effect” (p. 1155). In his research, Aguinis (1995) has found that low statistical power can be a cause of an error in analysis of the research results. Aguinis and Pierce (1999) advocate being aware of the low power effect of multiple moderated regression and consider this phenomenon as a possible cause for not detecting a moderation effect. According to Aguinis and Pierce (1999), low statistical power can be a result of having a predictor variable of the sample experiencing a smaller variance than the population or an unexpected information loss across the variables being measured. Therefore, researchers should use caution when interpreting the results and not rejecting the null hypotheses (i.e., that no moderation effect exists) if a moderation effect is suspected.

Future Research

While this study’s contribution to the pursuit of the understanding of organizational change behavior may only be slight, it does bring forth a new avenue of studying change. The next step may be to look across several organizations and capturing perceptions of the change process under similar terms both before the change initiative begins and right before its implementation. These organizations should span a diversified spectrum of categories and not be limited to government-sponsored

organizations. This longitudinal approach would allow researchers to understand how the individual perception of the change process changes or remains constant. A second recommendation would be to include more personality trait constructs into the study in order to capture more of the variability inherent in individual differences. A third recommendation would be to utilize methods of collecting the data that would allow for less loss of information such as incorporating continuous scales rather than discrete Likert scales.

Summary

This study recognizes, like most organizational change researchers, that change is inevitable in this evermore-dynamic world. The literature has advocated that organizations engage in change in order to remain efficient and competitive in rapidly changing environments. However, the literature has also specified that the agents of change cannot exclude organizational members from change planning and execution and expect a smooth transition of change adoption. Literature was also covered that suggests that regardless of the change facilitation strategies or process utilized, an individual's personality can influence his or her readiness for change.

Overall, this study was undertaken to examine how the individual's perception of the process of change and its relationship with readiness for change is moderated by an individual's personality. The study compared two samples from two different cultures in order to understand the impact of change across arbitrary borders. While the present study did not uncover conclusive evidence that suggests a moderating effect of personality on the relationship between process and readiness for change, this study did

provide support that the process used to induce change and an individual's unique personality has a valid place in modeling readiness for change.

This research added a small piece of knowledge to a continual expanding field of organizational change research that is attempting to address change issues across cultures. By exploring organizational change across nation-state boundaries, discoveries may be made that assist leaders of change to better understand that cultural differences that could affect how change should be undertaken. Therefore, this study may assist in a relevant effort to expand organizational change understanding to a more global level.

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Vita

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